



Carleton College

ELEVENTH ANNUAL CALENDAR

DAY AND EVENING DIVISIONS

1952-53

Carleton
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How to Register

- New full-time students enrolling for a degree, diploma or certificate will take all of these steps.
 - New part-time students enrolling for a degree, diploma or certificate will take steps 1, 2 and 4.
 - All other students, including returning students and those not enrolling for a degree, diploma or certificate will take step 4 only.
1. Complete application for admission on form available from the Registrar's Office. Applications should be submitted to the Registrar well in advance of term opening.
 2. Attach certificates of former schooling (Junior Matriculation and any studies pursued subsequently) to application for admission, or arrange for them to be sent to the Registrar.
 3. When application has been approved, (a) arrange for physical examination by own physician and (b) have him report results to the College on the health report form available from the Registrar's Office. This report should be completed and submitted to the College before final registration.
 4. During the appropriate registration period specified under The Academic Year (p. 3), come to the College to (a) arrange final selection of subjects, (b) complete registration forms, (c) pay fees, and (d) receive class and library admission cards.

College Office Hours

From September 1st to April 30th, offices are open at the following times:

Monday to Friday	{ 9.00 a.m. to 12.30 p.m. 2.00 p.m. to 9.00 p.m.
Saturday	9.00 a.m. to 12.30 p.m.

From May 1st to August 31st, offices are open at the following times:

Monday and Thursday	{ 9.00 a.m. to 12.30 p.m. 2.00 p.m. to 5.00 p.m. 6.30 p.m. to 8.30 p.m.
Tuesday, Wednesday and Friday	{ 9.00 a.m. to 12.30 p.m. 2.00 p.m. to 5.00 p.m.
Saturday	Closed all day, except in May

As this Calendar is published several weeks before the opening of the session, the College reserves the right to make whatever changes circumstances may require, including cancellation of particular courses.

Carleton College

ELEVENTH ANNUAL CALENDAR

DAY AND EVENING DIVISIONS

for the academic year

1952-53

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FIRST AVENUE AT LYON
OTTAWA 1, ONTARIO
CANADA

Telephone: 5-5161

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The Academic Year

1952

Summer Session

May 26, 27, 28	Registration for summer session.
May 29	Summer session classes begin.
June 9	Queen's Birthday. No classes.*
July 1	Dominion Day. College closed.
July 15	Last day for applications for supplemental examinations.
Aug. 4	Civic Holiday. No classes.*
Aug. 18	Supplemental examinations begin.
Aug. 25	Last day of summer session classes.
Aug. 27, 28	Summer session examinations.

*Classes will meet instead on the following day.

Winter Session

Sept. 8-13	Registration for classes in day and evening divisions.
Sept. 15	Classes begin in all courses, day and evening.
Oct. 13	Thanksgiving Day. No classes.
Nov. 15	Last day for applications for summer session supplemental examinations.
Dec. 13	Last day of classes in the first term, day and evening divisions.
Dec. 15-20	Mid-year examinations in first and second year full courses, and summer session supplemental examinations.

1953

Jan. 2, 3	Final examinations in first term half courses.
Jan. 5	Second term begins in day and evening divisions.
Apr. 2	Last day of classes in the second term, day and evening divisions.
April 3-6	Easter week-end. College closed.
Apr. 7-29	Final examinations in day and evening divisions.
April-May	Summer Survey School for Engineering students (4 weeks, dates to be announced).
May 15	Convocation for the conferring of degrees.

Historical Statement

Carleton College, established by the Ottawa Association for the Advancement of Learning in the summer of 1942, opened its first classes on September 21st in that year. In the first three years, teaching was done in evening classes only, in rented premises, and by part-time instructors. Instruction was given in the subjects of Grade XIII (Ontario) and first year university, with a few courses in the elements of public administration.

On March 19, 1945, day classes in matriculation courses were opened for the benefit of war veterans. In the following years, as the number of veterans diminished, civilian students were admitted to day classes.

In September, 1945, courses in Journalism and in the first year of Engineering were added to those already provided in Arts, Science and Commerce, and all these programmes were consolidated in a Faculty of Arts and Science.

The first degrees of the College, three Bachelor of Journalism and three Bachelor of Public Administration, were conferred on October 23, 1946.

On February 6, 1947, the College sustained a severe blow in the loss by death of Henry Marshall Tory, D.Sc., LL.D., D.C.L., F.R.S.C., first President of the College and the leader more responsible than any other for the success attained by the College in the first five years of its existence. On February 18, 1947, Murdoch Maxwell MacOdrum, M.A., Ph.D., Vice-President of the College, was appointed by the Board of Governors to succeed Dr. Tory as President.

In the summer of 1947 the College announced its plans for the organization of complete four-year Pass Courses and five-year Honours Courses which would lead to the degrees of Bachelor of Arts, Bachelor of Science and Bachelor of Commerce. The third year in all these courses was made available to students of the College in September, 1947, the fourth year in September, 1948, and the fifth year of certain Honours Courses in September, 1949. The first Pass degrees in Arts, Science and Commerce were conferred in May 1949, and the first Honours degrees in May 1950. By May 1952, the College had conferred 460 Bachelors' degrees.

The first full-time teaching appointments in the ranks of lecturer assistant professor, associate professor and professor became effective on September 1, 1947. These appointments, and all subsequent appointments to the teaching staff, have carried from the beginning the appropriate privileges of professional tenure.

On April 10, 1952, Royal Assent was given in the legislature of Ontario to *The Carleton College Act, 1952*. This Act became, as of that date, the Charter of the College. By it, the College is endowed with university powers (Sec. 3a), with "authority to grant in all branches of learning any and all university degrees and honorary degrees, and diplomas" (Sec. 5). The "government, conduct, management and control of the College" (Sec. 15) shall continue to be vested in the Board of Governors. There shall be a Chancellor who shall be titular head of the College (Sec. 19, (1) and (2)), a President who shall be "Vice-Chancellor and chief executive officer of the College" (Sec. 20, (1) and (2)), a Senate composed of the President, the Deans, members of Faculty of the rank of full professor, and such others as the Board of Governors shall determine (Sec. 21). The College "shall have power to establish and maintain such faculties, schools, institutes, departments, chairs and courses of instruction as shall be deemed meet by the Board."

Carleton College thus stands confirmed by specific charter in the university life upon which it entered in 1942. It is non-sectarian, co-educational, and is privately controlled by the members of the College corporation.

Enrolment in the winter session 1951-52, in day and evening divisions included 414 full-time students and 683 part-time students in courses offered for academic credit, and 344 registered in non-credit extension courses; a total, excluding duplicates, of 1397.

Chancellor

HARRY STEVENSON SOUTHAM, C.M.G., B.A., LL.D.

President and Vice-Chancellor

MURDOCH MAXWELL MACODRUM, M.A., Ph.D.

Board of Governors

Chairman

JAMES E. COYNE, B.A., B.C.L.

Secretary

CLARENCE CECIL GIBSON, Q.C.

Treasurer

VICTOR S. CASTLEDINE, Esq.

Members Ex-Officio

The Chancellor

The President and Vice-Chancellor

Elective Members

Retire 1952

V. S. CASTLEDINE, Esq.

W. M. CONNOR, Esq.

C. H. HULSE, Esq.

A. E. MACRAE, B.Sc.

JOS. McCULLEY, M.A.

W. D. MCKEWEN, Esq.

The Honourable NORMAN McL.
PATERSON

JOHN E. ROBBINS, M.A., Ph.D.

Retire 1953

A. A. CRAWLEY, O.St.J., F.C.A.

MCGREGOR EASSON, B.A., D.Paed.

Col. C. M. EDWARDS, D.S.O.

C. C. GIBSON, Q.C.

H. R. T. GILL, Esq.

F. C. JENNINGS, B.A.

W. S. KIDD, B.A.Sc.

F. W. WHITE, Esq.

Retire 1954

J. E. COYNE, B.A., B.C.L.

C. FRASER ELLIOTT, C.M.G., Q.C.

W. C. MACARTNEY, D.D.S.

T. R. MONTGOMERY, Esq.

The Honourable Mr. Justice

I. C. RAND, B.A., LL.B.

H. S. SOUTHAM, C.M.G., B.A.
LL.D.

NORMAN F. WILSON, Esq.

Officers of Administration

President

MURDOCH MAXWELL MACODRUM,
B.A. (Dal.), M.A. (McGill), Ph.D. (Glasgow)

Dean

JAMES ALEXANDER GIBSON, B.A. (U.B.C.), B.A., B.Litt., D.Phil. (Oxon.)

Registrar

EDWARD FLETCHER SHEFFIELD, M.A. (McGill), Ed.D. (New York)

Assistant Registrar

ELIZABETH M. BUCKLEY, B.A. (Queen's)

Student Personnel Assistant

JEAN ALEXANDRA LOATES

Medical Adviser

ERIC L. DAVEY, M.D., D.P.H. (Tor.)

Bursar

FREDERICK JAMES TURNER, B.Com., M.A. (Tor.)

Accountant

REGINALD M. WALTERS

Librarian

HILDA G. GIFFORD, B.A., B.L.S. (McGill)

Assistant Librarians

DORIS MAY HONEYWELL, M.A. (Queen's), B.L.S. (Tor.)
ALBERT SPRATT, B.A., (Sask.), B.L.S. (McGill)

Director of Athletics

NORMAN D. FENN, B.S., M.Ed. (Springfield)

Senate of the College

Members Ex-Officio

MURDOCH MAXWELL MACODRUM, M.A., Ph.D.

President of the College

Professor JAMES A. GIBSON, B.A., B.Litt., D.Phil.

Dean of the Faculty of Arts and Science

Professor LORNE N. RICHARDSON, M.A., M.Sc.

Professor WILFRID EGGLESTON, M.B.E., B.A.

Members appointed by the Board of Governors upon nomination by the Senate

Associate Professor M. S. MACPHAIL, M.A., D.Phil.

Associate Professor JOHN M. MORTON, M.Sc., Ph.D.

F. J. ALCOCK, Ph.D., F.R.S.C.

R. A. MACKAY, Ph.D., F.R.S.C.

WALTER B. HERBERT, B.A., LL.B.

WILLIAM KAYE LAMB, M.A., Ph.D., F.R.S.C.

Officers of Instruction

(Some changes and additions will take effect between the date of publication of this calendar and the opening of the session.)

SUMMER 1952

- Geoffrey Sherman DuVernet, B.A. (King's),
M.A. (St. Francis Xavier and Toronto),
French
- Adélard Gascon, M.A. (Ottawa), B.Péd. (Montréal), Ph.D. (Ottawa),
French
- Ruth Hoyt, B.S. (Boston), M.A., Ph.D. (McGill), R.N.,
Psychology
- William John Huggett, M.A., (Toronto),
Philosophy
- Archibald Edward Malloch, B.A. (Queen's), M.A. (Toronto),
English
- Craig McDonald Mooney, B.A. (Saskatchewan), M.A. (McGill),
Psychology
- John Alfred Powell, B.A., D.Phil. (Oxon.),
Mathematics
- Richard James Semple, M.A. (Toronto),
Mathematics
- Ralph Gordon Stanton, B.A. (Western), M.A., Ph.D. (Toronto)
Mathematics
- John Richard Walter, B.A. (Toronto),
Mathematics
- Eric C. J. Westbrook, B.A. (Sir George Williams), M.A. (Toronto),
Economics

WINTER 1952-53

Full-time Instructors

- Alexander Munro Beattie, B.A. (Tor.), A.M. (Columbia),
Assistant Professor of English
- Dorothy Chamberlin, M.A. (McGill),
Sessional Lecturer in English
- T. James S. Cole, B.Sc. (Eng.) (London), B.Sc. (Carleton), A.C.G.I.,
Lecturer in Physics
- Gordon S. Couse, B.A. (McMaster),
Lecturer in History (on leave of absence, 1952-53)

- Wilfrid Eggleston, M.B.E., B.A. (Queen's), F.A.G.S.,
Professor of Journalism
- H. Edward English, B.A. (U.B.C.),
Lecturer in Economics
- David M. L. Farr, B.A. (U.B.C.), M.A. (Tor.),
Assistant Professor of History
- Paul W. Fox, M.A. (Tor.),
Assistant Professor of Political Science
- R. Bruce Gamble, B.Sc. (McGill),
Sessional Lecturer in Engineering
- Amal Chandra Ghosh, M.Sc. (Calcutta),
Lecturer in Physics
- James A. Gibson, B.A. (U.B.C.), B.A., B.Litt., D. Phil. (Oxon.),
Professor of History
- H. Scott Gordon, B.A. (Dal.), A.M. (Columbia),
Assistant Professor of Economics
- Eve J. Hampson, B.A. (Bryn Mawr),
Assistant in Philosophy
- James M. Holmes, B.Sc. (U.N.B.), M.A. (Western), Ph.D. (McGill),
Assistant Professor of Chemistry
- William Irwin Illman, B.A., M.Sc. (Western),
Assistant Professor of Biology (Botany)
- George B. Johnston, M.A. (Tor.),
Assistant Professor of English
- Hans Jonas, Ph.D. (Marburg),
Associate Professor of Philosophy
- Wilfred H. Kesterton, B.A. (Queen's), B.J. (Carleton),
Lecturer in Journalism
- Gottfried Klee, B.S. (Polytechnic Institute of Brooklyn), M.S. (Purdue),
Demonstrator in Chemistry
- Paul MacDonell Laughton, B.A. (Tor.), M.Sc. (Dal.), Ph.D. (Wisconsin),
Assistant Professor of Chemistry
- G. Ross Love, M.A. (Western), Ph.D. (Tor.),
Assistant Professor of Physics
- M. M. MacOdrum, B.A. (Dal.), M.A. (McGill), Ph.D. (Glasgow),
Lecturer in English
- M. S. Macphail, B.A. (Queen's), M.A. (McGill), D. Phil. (Oxon.),
Associate Professor of Mathematics
- John W. Mayne, B.Sc., M.A. (Acadia), M.Sc. (Brown),
Assistant Professor of Mathematics (on leave of absence, 1952-53)

- William John McDougall, B.A. (Western), C.A.,
Associate Professor of Accounting
- C. G. Stewart McKeown, M.A. (Tor. and Princeton),
Assistant Professor of Philosophy
- John M. Morton, M.Sc. (Dal.), M.A., Ph.D. (Princeton),
Associate Professor of Chemistry
- Allan M. Munn, B.Sc. (Queen's), M.Sc., Ph.D. (McGill),
Associate Professor of Physics
- Herbert H. J. Nesbitt, B.A. (Queen's), M.A., Ph.D. (Tor.), D.Sc. (Leiden), F.R.E.S.,
Associate Professor of Biology
- Mary Anne Phillips, M.A. (Tor.), Assistant in English
- John A. Porter, B.Sc. (Econ.) (London),
Lecturer in Sociology
- Lorne N. Richardson, M.A. (Tor.), M.Sc. (McGill),
Professor of Mathematics
- Donald C. Rowat, B.A. (Tor.), A.M., Ph.D. (Columbia),
Assistant Professor of Political Science
- Donald M. Shepherd, M.A. (Queen's),
Assistant Professor of Classics
- Ernest W. Stedman, C.B., O.B.E., M.I.C.E., M.E.I.C., F.R.Ae.S., F.I.Ae.S.,
M.I.M., A.R.C.Sc., Assistant Professor of Engineering
- Audrey Elizabeth Strutt, B.A. (Tor.),
Assistant in English
- Stanley G. Tackaberry, C.B.E., B.A.Sc. (Tor.),
Sessional Lecturer in Engineering
- James S. Tassie, B.A. (McMaster), M.A. (Tor.),
Assistant Professor of French
- Edmund Albert Otto Turnau, M.Sc. (McGill), Lecturer in Biology
- Frank Robert Wake, B.A., Ph.D. (McGill),
Assistant Professor of Psychology
- Gordon James Wood, M.A. (Tor.),
Lecturer in English
- J. Perry Young, B.A. (Queen's), D. ès L. (Bordeaux),
Assistant Professor of French

Sessional Lecturers, Part-Time

- F. J. Alcock, B.A. (Tor.), Ph.D. (Yale), F.R.S.C., F.G.S.A. Geology
- Fedor P. Bohatirchuk, M.D. (Kiev) Russian

Thomas W. Cook, M.A. (Acadia), Ph.D. (Yale)	Psychology
Murray E. Corlett, B.A. (Tor.)	Commerce
Stephen A. Czako, M.Com., Dr.rer.pol. (Budapest), Dip. Int. Law (Harvard)	International Relations
William S. A. Dale, M.A. (Tor.)	Fine Arts
John Frederick Dawe, B.Sc., B.Ed. (Sask.), A.M. (Columbia)	Psychology
Thomas G. Donnelly, M.A. (Queen's)	Mathematics
Walter E. Duffett, B.Com. (Tor.), M.Sc. (Econ.) (London)	Economics
Florence S. Dunlop, B.A. (Queen's), A.M., Ph.D. (Columbia)	Psychology
J. G. Enns, M.A. (McMaster)	Mathematics
Tom Foley	Journalism
Eugene A. Forsey, M.A. (McGill and Oxon.), Ph.D. (McGill)	Political Science
S. MacLean Gilmour, B.A. (Manitoba), B.D. (Union), Ph.D. (Chicago), D.D. (Montreal)	
Ronald Grantham, M.A. (U.B.C.)	History
Gordon F. Henderson, B.A. (Tor.)	Public Law
Walter B. Herbert, B.A., LL.B. (Alta.)	Journalism
R. M. Hochster, B.Sc. (S.G.W.C.), Ph.D., (McGill)	Biochemistry
Richard Hoff, Dr. jur. (Breslau)	German
Robert H. Hubbard, B.A. (McMaster), A.M., Ph.D. (Wisconsin)	Fine Arts
Nathan Keyfitz, B.Sc. (McGill)	Statistics
Margaret Wade Labarge, A.B. (Radcliffe), B.Litt. (Oxon.)	History
Danilo I. Lalkow, M.D. (Moscow)	Russian
J. Douglas Leechman, B.Sc. (St. Patrick's), M.A., Ph.D. (Ottawa)	Journalism
Helen R. MacDonald, B.A. (Tor.)	French
Robert Alexander MacKay, B.A. (Tor.), Ph.D. (Princeton), F.R.S.C.	Political Science
June Helm MacNeish, Ph.B., A.M. (Chicago)	Anthropology
Roderick C. McDonald, B.A.Sc. (Tor.)	Engineering
Leslie McFarlane	Journalism
J. M. McQueen, M.A. (Tor.)	History
Carman H. Milligan, Mus. Bac. (Tor.)	Music

Peter Mackenzie Millman, B.A. (Tor.), A.M., Ph.D. (Harvard)	Astronomy
N. L. Nicholson, B.A., M.Sc. (Western), Ph.D. (Ottawa)	Geography
Vincent Pask	Journalism
R. A. J. Phillips, B.A. (Tor.)	Political Science
Bohdan Plaskacz, Lic.phil. litt. (Madrid)	Spanish
Fred T. Rabbitts, B.Sc. (McGill)	Chemistry
L. W. Rentner, B.A. (Tor.)	Mathematics
S. C. Robinson, M.A.Sc. (U.B.C.), Ph.D. (Queen's)	Geology
W. H. Showman, M.A. (Queen's)	Latin
A. A. Sterns, Lic.com. (St. Gallen), Dr.rer.pol. (Berne)	Accounting
Agnes C. Sweeney, B.A. (Queen's)	Latin
James Wreford Watson, M.A. (Edin.), Ph.D. (Tor.), F.R.G.S.	Geography
Jessie Wilson Watson, M.A. (Edin.)	Geography
George S. Watts, M.A. (Queen's)	Economics
Russell Allen Wendt, M.A. (Alta)	Psychology
Eric C. J. Westbrook, B.A., (S.G.W.C.), M.A. (Tor.)	Economics
Fred E. Whitworth, B.A. (Sask.), A.M., Ph.D. (California)	Psychology
Alice E. Wilson, B.A. (Tor.), Ph.D. (Chicago), F.R.S.C., F.G.S.A.	Palaeontology
Morley E. Wilson, B.A. (Tor.), Ph.D. (Yale), F.R.S.C., F.G.S.A., F.A.A.S.	Geology
R. F. Wilson, B.A. (Queen's)	Mathematics
Harry Wood, C.A.	Accounting

Summary of Courses Offered

IN THE DAY DIVISION

Courses leading to the degrees of:

Bachelor of Arts (B.A.)

Pass Courses, four years from Junior Matriculation (see p. 37).

Honours Courses, five years from Junior Matriculation (see p. 41).

Bachelor of Arts in Public Administration (B.A.)

Honours Course in Public Administration, five years from Junior Matriculation (see p. 44).

Bachelor of Journalism (B.J.)

Four years from Junior Matriculation (see p. 48).

Bachelor of Commerce (B.Com.)

Four years from Junior Matriculation (see p. 52).

Bachelor of Science (B.Sc.)

Pass Courses, four years from Junior Matriculation (see p. 55).

Honours Courses, five years from Junior Matriculation (see p. 57).

Courses leading to:

Graduate Diploma in Public Administration

One year from bachelor's degree. (See p. 46).

Certificate in Engineering

Two years from Senior Matriculation or equivalent standing, or three years from Junior Matriculation.

Students completing the Engineering course at Carleton College may, if recommended, be admitted to the third year of Engineering courses at another university, e.g., McGill University, Queen's University or The University of Toronto, where they may qualify in two additional years for a degree in Engineering. (See p. 59).

Alternatively, students completing the Engineering course at Carleton College may transfer to the course leading to the degree of Bachelor of Science with Honours in Applied Physics, which involves two additional years of study in Carleton College. (See p. 58).

IN THE EVENING DIVISION

Courses leading to the degrees of:

Bachelor of Arts (B.A.)

Pass Courses involving the completion of twenty subjects after Junior Matriculation. (See p. 37).

Bachelor of Commerce (B. Com.)

A course involving the completion of 20½ subjects after Junior Matriculation. (See p. 52).

Bachelor of Science (B.Sc.)

Pass Courses involving the completion of twenty subjects after Junior Matriculation. (See p. 55).

Courses leading to:

Certificate in Public Service Studies

A course for those with at least Junior Matriculation standing or the equivalent, involving the completion of six subjects. (See p. 45).

Graduate Diploma in Public Administration

A course involving completion of five subjects after the bachelor's degree. (See p. 46).

Courses for those who are not degree candidates:

Subjects in the degree courses are open to persons who do not wish to study for a degree, providing that they have the required background for the courses they choose. (See pp. 63 ff.).

As an extension service, non-degree courses in subjects of cultural and vocational value are open without specific admission requirement to members of the public. (See special extension bulletins.)

General Information

Class Hours

Most classes (day and evening) meet for three hours a week. Those involving laboratory work usually meet for that purpose for an additional two or three-hour period once a week.

Summer session classes usually meet for two and one-half hours on each of two evenings a week.

Class timetables are published separately for the day and evening divisions, and may be obtained from the Registrar's Office.

Course Numbers

In 1952 courses were numbered according to the following pattern:

- 50-99 Preparatory courses
- 100-199 Courses usually taken in the first year
- 200-299 Courses usually taken in the second year
- 300-399 Courses open to senior undergraduates or graduate students.

In the section Details of Subjects (pp. 63 ff.) of this calendar, former course numbers are shown in brackets following new course numbers, e.g. Economics 210. [2].

Facilities

The College is housed in a four-storey brick building, set on a small campus in the Glebe, one of Ottawa's residential districts, about ten minutes by street car or bus from the centre of the City.

In addition to classrooms and seminar rooms, facilities include engineering, chemistry, biology, geology and physics laboratories; an audio-visual aids centre including equipment for sound motion picture projection, film-strip and slide projection, and radio workshop activities; a canteen; an auditorium equipped for stage productions. Nearby is a three-storey students' union and a recreation building which provide accommodation for Students' Association offices, *The Carleton* (student weekly newspaper), reading rooms, games rooms, darkrooms, radio broadcasting rooms, club rooms and a student lounge. Athletic activities are carried on in the gymnasium and playing fields of Lansdowne Park about six blocks from the College.

Completed in 1951, a new library building provides study space for 200 students at one time and accommodates 40,000 volumes.

Student Activities

All students in the day and evening divisions of the College are members of, and pay the fees set by, the Students' Association. The Students' Council, executive body of the Association, is elected by the students in the spring of each year.

Activities sponsored by the Students' Association, through its Council, include the publication of a weekly newspaper, *The Carleton*; dances and parties; women's, dramatics, radio, short story, poetry, choral, language and camera clubs; chess, bridge and sports clubs; commerce, science and engineering societies; a college band, a debating society, a model parliament and political clubs; welfare fund campaigns; and a wide variety of educational and recreational programmes.

An Athletic Board, composed of representatives of faculty and students, supervises a sports programme which includes both intramural and intercollegiate athletics.

Military Training

UNIVERSITY NAVAL TRAINING DIVISION. The University Naval Training Division has been established to select and train suitable young university students for commissioned rank in the Royal Canadian Navy and the Royal Canadian Navy (Reserve).

Entry. Entry into the U.N.T.D. is open to all suitable male undergraduates attending Canadian universities and colleges. Candidates must be medically fit, 17 years of age or over, have a sound academic record and possess the necessary officer-like qualities.

Selected candidates will undergo a three-year training course which includes training at local naval divisions during the academic year, and in ships and establishments of the Atlantic and Pacific Commands during the summer months.

Undergraduate students are entered into the U.N.T.D. as Probationary Cadets in the specialist branches to which their academic fields are allied.

Selection. During the first year of training, all Probationary Cadets come before a selection board to determine their suitability for commissioned rank. Successful candidates are confirmed in the rank of Cadet R.C.N.(R). Candidates who fail the board may be given an opportunity to repeat the training year and appear again before a selection board.

Training. The U.N.T.D. training programme during each of the academic years consists of divisional drills held at H.M.C.S. "Carleton", Dow's Lake, one night every week.

U.N.T.D. cadets must train ashore and afloat during at least two summers of their service. This may include the entire summer vacation period. These periods are spent in ships and establishments of the Atlantic and Pacific Commands. All U.N.T.D. cadets must pass certain courses in order to qualify for a commission in either the R.C.N. or the R.C.N.(R.) A large part of the summer training period is spent aboard ships of the R.C.N. and foreign ports are frequently visited. The first summer of required training is devoted to a general course for personnel

of all branches. During subsequent summers the training programme provides specialist training in each branch.

Pay. Cadets are paid for all training, including divisional drills at a rate equivalent to that prescribed for Acting Sub-Lieutenants, \$170 per month. Cadets receive half a day's pay for every divisional drill during the academic year. When travelling on duty from the parent naval division to Halifax, N.S., or Esquimalt, B.C., for summer training, cadets receive travelling expenses and are paid for the days during which they are travelling. In addition to actual payment and expenses, U.N.T.D. cadets are provided with uniforms, lodgings, medical and dental care at public expense during the summer training period.

Commissions in the Permanent Force. Cadets wishing to make the Permanent Force a career must spend at least three full summers under training. Normally applications are considered during the third year. Those cadets deemed suitable by both a Professional and a Selection Board, and who are medically fit, are attested into the Permanent Force at the commencement of their final year at university. They then receive full pay and allowances during this year at university and upon graduation are allocated for further training.

Commissions in the Reserve Force. Upon graduation and successful completion of the U.N.T.D. training programme, cadets are promoted to the rank of Sub-Lieutenant and appointed to a naval division on either the Active or Retired Lists of the R.C.N.(Reserve).

Information. For further particulars apply to:—Lt. Cdr. Jacques Bonneau, R.C.N. (R), Commanding Officer, U.N.T.D., or Lt. Cdr. E. S. Price, Staff Officer, U.N.T.D., H.M.C.S. "Carleton", Dow's Lake, Ottawa.

CANADIAN OFFICERS' TRAINING CORPS. The Carleton College contingent of the Canadian Officers' Training Corps was organized in the fall of 1949. It operates under a programme laid down by the Department of National Defence.

Purpose. Purpose of the programme is to qualify selected college undergraduates for a commission in the Canadian Army in corps appropriate to their educational qualifications.

Eligibility. To be eligible for selection candidates must be proceeding to a college or university degree. They must be Canadian citizens or British subjects normally resident in Canada, and must meet the age and physical requirements of their respective corps. Candidates are chosen by an Officers' Selection Board.

Training Programme. The training programme is divided into theoretical and practical phases. The former are given at the College during the academic year and consist of lectures, discussions and demonstrations on military subjects in each of three years. These are conducted by the

Resident Staff Officer and members of the faculty, and are designed to supplement the detailed and practical knowledge gained during summer vacation training in the practical phases which involve a series of attachments to the Canadian Army, Active Force, for a maximum period of four months each summer. Training here includes the study of and practical training in general military subjects and subjects special to the corps in which the candidate is preparing for a commission.

What it leads to. Successful completion of three years of the theoretical phase and three summer vacation periods, practical phase, qualifies candidates as lieutenants, Active Force (short service commission), or lieutenants, Reserve Force, while two complete years of training qualifies candidates as second-lieutenants, Active Force (short service commission), or second-lieutenants, Reserve Force. Students who successfully complete three years of C.O.T.C. training may be appointed, upon graduation, to the Active Force in the rank of lieutenant (regular commission). Graduates who have successfully completed two or three years of C.O.T.C. training but who do not wish to join the Active Force may be posted to a reserve unit or to the Supplementary Reserve.

Status and Pay. Candidates are appointed as officer cadets, which temporary rank they hold throughout the first two phases of the training period, and are then appointed second-lieutenants in the C.O.T.C. Cadets are entitled to pay and allowances for each day of duty at rates laid down for temporary second-lieutenants, Canadian Army, Reserve Force. This is \$170 per month, with lodging, board, and medical care for single officers, and \$210 per month for married officers. Cadets are paid for all theoretical and practical phases.

Further information and details may be obtained from: Officer Commanding, Major W. H. Kesterton; Second-in-Command, Captain J. M. Holmes; or Resident Staff Officer, Major J. A. Fraser, M.C.

Student Services

Health. Under the supervision of the College Medical Adviser a Student Health Service is provided for the protection and promotion of the health of the student body. Its primary purposes are:

- (1) To supervise the health of all full-time students and to ascertain their fitness for academic work.
- (2) To investigate the physical fitness of all students who wish to participate in college athletic and recreational activities.
- (3) To provide a health consultation and advisory service for students. Those with serious health defects are referred for treatment as necessary.
- (4) To provide emergency treatment and medical care for athletic injuries and minor illnesses.

(5) To plan a health education programme designed to conserve and promote the overall health of the student body.

Prior to initial registration at the College, each full-time student is required to submit, on a personal health record form provided by the College, a certificate of medical examination performed by his family physician. In addition, each full-time student shall have a chest X-ray as early as possible in the first year of his attendance at the College. Arrangements for such X-rays will be made by the College free of charge. Part-time students also are encouraged to participate in the X-ray programme. Chest X-ray facilities are available throughout the student's academic career.

(Students who object to these examinations on religious grounds will provide the Medical Adviser with a written statement of the grounds on which they object.)

Each year before participating in College athletic activities, each student will report to the Medical Adviser and obtain a certificate of medical fitness which will be submitted to the appropriate sports officer.

The Medical Adviser will re-examine any student he considers should be given further attention, as indicated by his review of pre-registration health record forms. Any student requesting re-examination may avail himself of the services of the Medical Adviser who will be available in his office in the main building at stated periods.

The College is not responsible for expenses incurred as a result of injuries sustained by students while participating in athletic activities. Information regarding available accident insurance may be had on request from the College Bursar.

The health service fee is stated on p. 22.

Employment. A Student Placement Service is operated by the College. Located in the Registrar's office, it offers assistance to students in obtaining part-time employment during the academic year, full-time employment during the summer vacation period and permanent employment upon graduation. Assistance is offered to alumni of the College at any time.

The Student Placement Service cooperates closely with the National Employment Service and the Civil Service Commission of Canada.

Housing. The College has no dormitories of its own but a housing registry is maintained in the office of the Registrar, offering assistance to students wishing rooms or rooms with board. Such rooms are available within easy walking distance of the College.

Cost of room and board is about \$55 to \$65 a month. A room with breakfast and dinner rents for \$45-\$55 a month; with breakfast only, \$30-\$35; without meals, \$25-\$30; room with grill, \$30-\$35.

Numerous requests are received for students who will do part-time work in the home in return for their room and board.

Food. A canteen is located in the main College building. Several restaurants are within easy access of the College.

Counselling and Guidance. Members of the administrative and instructional staffs of the College are anxious to be of assistance to students in their planning of educational programmes, their choice of careers and in the solution of their personal problems.

Lectures and discussions on study methods, the use of the college library, the college curricula, the choice of a career, and related topics are arranged for new students in the day division during their first year at the College.

A library of occupational information is at the disposal of students (in the Registrar's Office), occasional lectures on specific occupational fields are arranged, and guidance in methods of seeking employment is provided.

The counselling services of the Department of Veterans' Affairs also are available to student veterans.

Academic Costume

The academic hood of Carleton College is of the design specified in the United States Intercollegiate Code for the bachelor's degree. It is of *simple* shape, made of black *stuff*, and lined in silver with two chevrons of equal width inserted, the chevron nearer the neckline, red, and the chevron nearer the peak of the cowl, black. The border of the hood denotes the degree awarded, according to the following colour combinations. Arts: white; Journalism: white with a cord of black superimposed upon the border, set in $\frac{1}{4}$ " from the lower edge; Science: golden yellow; Commerce: drab; Public Administration: drab with a cord of dark brown superimposed upon the border, set in $\frac{1}{4}$ " from the lower edge.

Fees

Tuition Fees

In courses other than Engineering:

- | | |
|-----------------------------------------------------------------|----------|
| (a) Tuition, per subject..... | \$ 48.00 |
| (Honours students, per year, \$240) | |
| (b) Additional for each subject involving laboratory work | 15.00 |

e.g. A full-time day student taking five subjects, one of them involving laboratory work, would pay tuition amounting to \$255.

A part-time evening student taking two subjects, one of them involving laboratory work, would pay tuition amounting to \$111.

Engineering:

- | | |
|--------------------------------------------------------------------------|--------|
| (a) Tuition, per year of two terms..... | 330.00 |
| (b) Additional for summer survey camp, payable at end of first year..... | 35.00 |

Miscellaneous Fees (winter session only)

- | | |
|-----------------------------------------------------------------------|-------|
| (a) Full-time students in Engineering, per year..... | 23.00 |
| (Students' Association \$16, Athletics \$5, Health Service \$2) | |
| (b) Full-time students in other courses, per year..... | 22.00 |
| (Students' Associations \$15, Athletics \$5, Health Service \$2) | |
| (c) Part-time students, per subject..... | 2.00 |
| (Students' Association \$1.50, Athletics 50c—Maximum \$5 per student) | |

Examination Fees

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| (a) Supplemental examination, per paper..... | 3.00 |
| (b) Special examination, per paper..... | 5.00 |
| (c) When examinations are written at a centre other than Carleton College the student will pay the fee stated above plus the costs of mailing and supervision. | |

Graduation Fee

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Payable on or before April 1st of the graduating year..... | 12.50 |
| (This fee covers the ordinary expenses of the graduation exercises and, in addition, the cost of providing hoods for the use of the graduating class). | |

Transcript Fee

- | | |
|---------------------------------------------------------------------------------------------------------|------|
| For each transcript of academic record, except for the first two which are supplied free of charge..... | 1.00 |
|---------------------------------------------------------------------------------------------------------|------|

Deferred Payment Fee

Payable when fees are paid in instalments:

(a) For a half course.....	1.00
(b) For 1, 1½ or 2 courses.....	2.00
(c) For more than two courses.....	5.00

Fees may be paid by any of the following plans:

1. Payment in full at the time of registration.
2. Payment in *two* instalments:
 - (a) At registration—½ of the total tuition, *plus* Miscellaneous Fees (where applicable), and Deferred Payment Fee (see above).
 - (b) At or before mid-session—the remaining half of the total tuition fee.
3. Payment in *six* instalments (winter session only):
 - (a) At registration—⅙ of the total tuition, *plus* Miscellaneous Fees (where applicable), and Deferred Payment Fee (see above).
 - (b) On the 15th of October, November, December, January and February—⅙ of the total tuition fee.

FINANCIAL AID FOR STUDENTS

1. The College welcomes the offer of scholarships, prizes, medals, bursaries and loan funds.
2. Scholarships, prizes, medals, bursaries and loan funds may be accepted from donors at the discretion of Senate on appropriate recommendation of the President. Awards of scholarships, prizes and medals will be made by Senate to qualified candidates of merit; but the Senate may withhold any such award if no candidates of merit present themselves. The award of scholarships, prizes and medals shall be final when formally announced by the College.
3. The standing of students being considered for any such awards shall be determined on the basis of courses taken for credit and shall not take account of extra courses being taken for no credit.
4. (a) No limitation shall be placed upon the number of prizes and medals which any one student may win in any one year. (b) A student may be declared the winner of as many scholarships as he may win as a qualified candidate of merit but, in the case of awards carrying a major financial amount, such student will normally receive the proceeds only of the largest among these major amounts. (c) Winners of scholarships and prizes may resign the monetary value but retain the honour of such awards, and their names will be published as winners. In cases arising under 4(b) or 4(c), the monetary amounts so relinquished may be awarded *by reversion* if merited.

5. Students who may apply for entrance scholarships at colleges or universities other than Carleton College will not be restricted in applying for similar scholarships at Carleton College.
6. Undergraduate scholarships and bursaries under the jurisdiction of the College will ordinarily be paid in two instalments, one in October and one in January and provided that the winners are continuing in their courses to the satisfaction of the College. If the work of a student in the first term has been unsatisfactory, payment for the second term may be withheld.
7. The College does not guarantee the award of any scholarship, prize, medal or bursary other than those created from funds of the College. Those awards based upon gifts of individuals or associations other than the College will be awarded only after the funds required have actually been received from the donors.

Scholarships

A. Undergraduate Scholarships tenable at Carleton College

Mercy Neal Southam Entrance Scholarships.

In the fall of 1952 seven \$500 scholarships will be awarded to students entering the second year of Arts, Journalism, Commerce or Science, or the first year of Engineering, at Carleton College. One will be awarded, if merited, to the applicant with highest standing from each of the following: Glebe Collegiate Institute, Lisgar Collegiate Institute, Nepean High School, Ottawa High School of Commerce, Ottawa Technical High School, and the first year of Carleton College, and one to the applicant with highest standing from schools (other than those named above) in the counties of Renfrew, Lanark, Carleton, Russell, Prescott, Glengarry, Stormont, Dundas, Grenville and Leeds.

Funds for three of these scholarships are endowed by bequest of the late Wilson Mills Southam. Three are provided by his brother, Harry Stevenson Southam, C.M.G., LL.D. The scholarships are in memory of their grandmother, Mercy Neal Southam. The seventh will be available only in 1951, 1952 and 1953, from additional funds accruing from the bequest of the late Wilson Mills Southam.

Scholarship applications, accompanied by a formal application for admission to course, and supported by a letter of recommendation from the High School Principal, must be submitted to the Registrar, Carleton College, not later than May 1, 1952, on forms available from the College. To be eligible, a student must be qualified academically and physically for admission without conditions to one of the courses named.

Candidates from the secondary schools must write at least *six* Grade XIII final examination papers in 1952 and will be judged on their *eight*

best papers. Candidates from the first year at Carleton College must have written final examinations in at least five subjects in the spring of 1952 and will be judged on all five. Final selection will be made by the President of the College on recommendation by the Committee on Admission and Studies.

The scholarships will be paid in two instalments—\$250 in the fall of 1952 (\$200 applied to tuition, \$50 cash) and, if the winner is still in attendance and making satisfactory progress, \$250 in the fall of 1953 (\$200 applied to tuition, \$50 cash).

Ottawa Business and Professional Women's Club Scholarship.

Value \$100. Awarded annually to a girl entering Carleton College with high matriculation standing from one of the Ottawa collegiates and high schools.

Regional Entrance Scholarships.

Value \$500 each. Four will be awarded annually, if merited, on the basis of outstanding achievement in secondary school studies, to students entering Carleton College with junior or senior matriculation standing—one from each of the following regions:

(a) The provinces of British Columbia, Alberta, Saskatchewan and Manitoba, Yukon and the Northwest Territories.

(b) The province of Ontario.

(Students completing secondary school studies in any of the following Ottawa Schools will *not* be eligible: Glebe Collegiate Institute, Lisgar Collegiate Institute, Nepean High School, Fisher Park High School, Ottawa High School of Commerce, Ottawa Technical High School—they may apply for Mercy Neal Southam Entrance Scholarships.)

(c) The province of Quebec.

(d) The provinces of New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland.

Each scholarship winner will have \$125 applied to the cost of tuition at the time of registration in his first year at Carleton College, and, if he is still in attendance and making satisfactory progress, \$125 at the time of registration in each succeeding year, not exceeding four years in all.

Scholarship applications, accompanied by a formal application for admission to course and supported by a letter of recommendation from the high school principal, must be submitted to the Registrar, Carleton College, not later than May 1st, on forms available from the College.

Canadian Legion Scholarships.

The Dominion Command, Canadian Legion, B.E.S.L., offers one scholarship, valued at \$400, and the Ontario Command offers additional

scholarships, valued at \$300 each, to be awarded to secondary school graduates entering university in the autumn of 1952. They will be awarded only to persons who are eligible for membership in the Canadian Legion or to the children of deceased veterans or to the children of parents either of whom is eligible for membership in the Canadian Legion. At least one scholarship will be awarded, if merited, to a student resident in each Legion District of the Ontario Command, upon entry to a college or university in Ontario. Application should be made by June 30 to the Provincial Secretary, Ontario Command, Canadian Legion, 82 Charles Street East, Toronto.

Ottawa Women's Canadian Club War Memorial Scholarship.

Value approximately \$100.00. Awarded annually to a student progressing from first to second year in Carleton. Preference is given to veterans.

Falkland Chapter (I.O.D.E.) Scholarship.

Value \$75.00. To be awarded to an outstanding student progressing from one year of course to another in Carleton College. Donor: Falkland Chapter, I.O.D.E. Established 1950.

Clendinnen Scholarship in Biology.

Value \$75.00. Awarded annually to an outstanding student proceeding from the fourth to the fifth year of the honours course in biology at Carleton College. Established 1951, in memory of Mr. and Mrs. T. E. Clendinnen, by their daughter.

Kenneth R. Wilson Memorial Scholarship.

An endowed scholarship in memory of the late Kenneth R. Wilson, Ottawa reporter of national affairs and member of the College's Advisory Council on Journalism, will be provided by a number of his close friends in journalistic and business circles. Details will be announced.

B. Post-graduate Scholarships tenable elsewhere

Students are invited to watch the College bulletin board for notices of scholarships, and to consult the Registrar who has a number of publications outlining fellowships and scholarships available for study in the various universities in Canada and abroad.

B'nai B'rith Awards

Prizes

Two of \$50 each, awarded annually to students with superior academic records, progressing from one course-year to another in Carleton College. Donor: B'nai B'rith, Ottawa Lodge No. 885. Established 1947.

Faculty Club Prize.

Value \$25. Awarded by the Faculty Club of Carleton College to a student chosen by the President of the College.

German Language Club Prize.

Value \$25. To be awarded to a student of German chosen by the President of the College.

National Council of Jewish Women Award.

Value \$25. To be awarded on the recommendation of the Department of History to the student achieving the best standing in Canadian History. Donor: National Council of Jewish Women, Ottawa Section. Established 1950.

Lilian I. Found Prize for Poetry.

Value \$25. Offered annually for the best lyric of fifty lines or less submitted by an undergraduate of Carleton College by March 15. Details may be obtained from the Registrar's office. Donor: Mrs. Lilian I. Found. Established 1950.

Chemical Institute of Canada Prize.

Value \$25. To be awarded as a book prize to the best student proceeding to the final year of the course leading to the degree of Bachelor of Science with honours in Chemistry. Donor: The Chemical Institute of Canada. Established 1950.

Engineering Institute of Canada Prizes.

For proficiency in engineering studies, a book prize of the value of \$15 will be awarded to a student completing second-year Engineering, and one of the value of \$10 to a student completing first-year Engineering. Donor: Ottawa Branch, Engineering Institute of Canada. Established 1947.

D. F. McKechnie Prize in Accounting.

The yield of a \$200 fund will be used each year to purchase a book prize to be awarded, when merited, to a graduating student in Commerce for proficiency in the study of accounting. Donor: D. F. McKechnie, C.P.A. Established 1951.

American Society for Metals Prize in Engineering.

Value \$25.00. To be awarded to a student with high standing in the first year of the Engineering course. Donor: Ottawa Valley Chapter, American Society for Metals. Established 1951.

1952 Memorial Prize.

Value \$25. To be awarded to a deserving student. Donor anonymous. Established 1951.

Henry Birks and Sons (Ontario) Limited Award.

Value \$25. Awarded annually to a Carleton College student with a superior academic record who has contributed substantially to extra-curricular activities. Donor: Henry Birks and Sons (Ontario) Ltd. Established 1951.

Wilgar Memorial Prize in English.

The yield of a \$200 fund will be used each year for a book prize to be awarded to a Carleton College undergraduate who has shown excellence in essay-writing. Established 1951, in memory of the late W. P. Wilgar, Assistant Professor of English at Carleton College, 1948-50.

Medals

The Governor-General's Medal.

Awarded annually to the student standing at the head of the graduating class. Donor: His Excellency the Governor-General of Canada. Established 1952.

Senate Medal for Outstanding Academic Achievement.

Awarded annually, when merited, to a graduating student of outstanding academic achievement. Established 1952.

University Medals.

Awarded annually, when merited, to the graduating students standing highest in Arts, Science, Commerce and Journalism. (When the same student qualifies for the Governor-General's Medal and a University Medal, the latter will not be awarded.)

Bursaries

Applications for Dominion-Provincial Student-Aid Bursaries, Type A, and for Rotary Club and Lions Club "Scholarships" (for students entering university from secondary school) should be made through secondary school principals. Applications for Dominion-Provincial Student-Aid Bursaries, Type B (for students progressing from one year to another in university) should be made through the College Registrar after the commencement of fall classes.

Applications for all other bursaries listed below should be made to the College Registrar not later than August 31st.

Dominion-Provincial Student-Aid Bursaries.

Value up to \$400.00 each and tenable at the various colleges and universities of Canada, including Carleton College. They are awarded to "students of good character, whose health and physical fitness are satisfactory, who meet the required academic standing, and who, without financial assistance, could not continue their formal education".

Candidates must be residents of Ontario and have obtained at least second-class standing in the examinations of the year prior to that for which the bursary would be used.

Rotary Club of Ottawa "Scholarships".

Value up to \$400.00 each, awarded annually, on the basis of scholarship and financial need, to students from Ottawa schools entering a college or university in Ottawa. One or more of these may be held at Carleton College.

Lions Club of Ottawa "Scholarships".

Value up to \$400.00 each. Awarded annually to Ottawa students who, without financial assistance, could not continue their formal education. These may be held at Carleton College.

Ottawa Superfluity Shop Bursaries.

An annual sum of approximately \$180.00 is available to provide bursaries for veterans of World War I or World War II, or for the descendants of such veterans, who are students in good standing at Carleton College and in need of financial assistance.

Ottawa Citizens War Services Committee Bursaries.

An annual sum of approximately \$60.00 is available to assist veterans, their dependents or descendants, who are students in good standing at Carleton College and are in need of financial assistance.

Gyro Club Bursaries.

Two bursaries of \$125 each. Awarded annually to male students of promise who have completed at least one academic year at Carleton College, who have specific professional or vocational goals, and who, without financial assistance, could not continue their formal education. Donor: Gyro Club of Ottawa. Established 1949.

Quota Club Bursary Fund.

The sum of \$200 is available for the year 1952-53 to aid women students in good standing who are in need of financial assistance. Donor: Quota Club of Ottawa. Established 1950.

Faculty Bursary Fund. The fund exists to give assistance, in the final two years of course, to students who without financial aid would not be able to complete their studies. Recipients are morally but not legally obligated to repay the amounts received, at some time after graduation, and in addition to contribute some additional sum either to this fund or to an alumni bursary fund if it is in existence. Donors: Members of the instructional staff of the College. Established 1950.

Atkinson Charitable Foundation Bursaries.

The sum of \$2,000 is available to assist students of Carleton College in the academic year 1952-53. Approximately one-half of this sum will be awarded to students entering the College and one-half to students progressing from one course-year to another. Terms of award are as follows:

1. In addition to scholastic merit and financial need, goal and promise will be considered in selecting recipients.
2. Candidates must be residents of Ontario.
3. Applications may be for sums up to \$500.
4. An applicant may be entering or continuing, as a full-time undergraduate, in any course at Carleton College.
5. For one of the awards, preference will be given to candidates intending later to pursue studies in Theology.
6. Applications should be made on forms available from the Registrar's Office, not later than August 31, 1952.

Donor: The Atkinson Charitable Foundation. Offered for the first time in 1951, as an experiment in the provision of financial aid to students.

R. A. Beamish Bursary.

Value: approximately \$250. Awarded annually to a student entering or progressing from one academic year to another who, without financial assistance, could not continue his or her formal education. To be eligible, an applicant must be a resident of one of the eleven eastern counties of Ontario (Renfrew, Frontenac, Lanark, Leeds, Carleton, Grenville, Russell, Dundas, Prescott, Glengarry, Stormont). Donor: The R. A. Beamish Foundation. Established 1951.

South Ottawa Kiwanis Club Bursary.

Value \$250. Awarded annually to a student who has completed successfully at least one academic year in Carleton College and who, without financial assistance, could not continue college studies. Donor: Kiwanis Club of South Ottawa. Established 1951.

Rotary Club of Ottawa Emergency Fund.

The sum of \$200 annually is available to aid promising students who face financial need arising out of emergency expenditures. Applicants must have completed successfully at least one academic year in Carleton College and may apply for aid from this fund at any time during the academic year. Donor: Rotary Club of Ottawa. Established as a scholarship fund, 1947; bursary fund, 1952.

Philemon Wright Chapter (I.O.D.E.) Bursary.

Value \$75. Awarded annually to a student with satisfactory academic standing who is in need of financial assistance. Open only to residents of the Province of Quebec, with preference to those resident in the County of Hull and adjoining counties. Donor: Philemon Wright Chapter, I.O.D.E. Established 1952.

Loan Funds

The college administers several small but growing loan funds which are available for short and long term loans to students in need of financial aid.

Loans made from funds held in trust by the College are limited to \$250 a year for any one student, with a maximum of \$600 total to one student. They are repayable after termination of undergraduate studies, and bear interest at the rate of 3% per annum beginning January 1st following the termination of studies. To be eligible for a loan from one of these funds a student must have a satisfactory academic record and be able to show that he could not continue his studies without financial assistance.

General Loan Fund. Unrestricted. Founded by Kenneth Brewster. Other donors: Women of Rotary, Office Staff Club of Carleton College, F. J. G. Cunningham, Katherine J. Milliken, and several anonymous donors. Established 1948.

Journalism Loan Fund. Reserved for students in the course leading to the degree of Bachelor of Journalism. Founded by The Canadian Women's Press Club, Ottawa Branch. Other donors: Rielle Thomson, Kenneth Wilson, Blair Fraser, Canadian Pulp and Paper Association, Bruce Hutchison, F. P. Galbraith. Established 1948.

Commerce Loan Fund. Preference is given to students in the course leading to the degree of Bachelor of Commerce. Founded in 1949 by the class of Commerce '49. Other donors: Class of Commerce '50.

Zonta Club Loan Fund. Reserved for women students. Donor: The Zonta Club of Ottawa. Established 1948.

Lady Perley Chapter (I.O.D.E.) Loan Fund. Preference is given to veterans. Donor: Lady Perley Chapter, I.O.D.E. Established 1948.

Laurentian Chapter (I.O.D.E.) Loan Fund. Preference is given to students who are British by birth. Donor: Laurentian Chapter, I.O.D.E. Established 1950.

Arrangements may be made, on occasion, for assistance from funds administered by other organizations, among which are:

Veterans' University Loan Fund. Administered for the Department of Veterans Affairs to aid student veterans who are in receipt of allowances but need assistance to meet emergency expenses.

Canadian Naval Service Benevolent Trust Fund. This fund is to relieve distress and promote the well-being of naval personnel and their dependents both while serving and after discharge. Assistance from this fund may be approved either as a grant or a loan, depending upon circumstances.

R.C.A.F. Benevolent Fund (University Loan Fund). This fund was planned to assist in the education of discharged members of the R.C.A.F., their children and children of deceased personnel. Sums up to \$300 may be borrowed and are repayable out of the following summer's earnings.

Rotary University Student Loan Fund. The Rotary Club of Ottawa administers a Student Loan Fund to assist worthy students, during their junior and senior years, to complete a regular university course at any recognized university in Canada. To be eligible an applicant must be a Canadian citizen, resident in the County of Carleton, Ontario, and a student in good standing eligible to enter the junior or senior year. Maximum loan is \$250 in one year, \$500 total.

Harry F. Bennett Educational Fund. Administered by the Engineering Institute of Canada, this fund is available to provide financial assistance to needy students who have successfully completed their first year in engineering or the equivalent.

Further information regarding these sources of financial aid may be had from the Registrar.

WITHDRAWAL AND REFUND

Students who are forced to withdraw from a course, or from the College, are required to notify the Registrar in writing and to give their reasons for withdrawal. The College assumes the obligation of carrying the student and accommodation on a yearly basis. Therefore:

- (a) All tuition credits and refunds shall be made entirely at the pleasure of the College.
- (b) Credits or refunds will be granted only as follows:
 - (1) Cash refunds may be granted in cases where students are compelled to withdraw on account of serious and continued personal illness.
 - (2) In case a student who is regularly employed during the day is sent out of the city permanently by his employer or compelled so to change his working hours as to prevent his continuing at the College, a refund may be granted.
 - (3) Cash refunds may also be granted in cases where the student is compelled to withdraw for other personal reasons, provided that these reasons are satisfactory to the College authorities.
- (c) Tuition not refunded or used may, if a certificate of credit is secured from the Bursar, be applied upon subsequent courses pursued in the College, provided such courses are taken within two years of the date of withdrawal of the student.
- (d) Miscellaneous fees and Deferred Payment fees normally are not refundable.
- (e) The portion of the tuition fee refunded is determined by the date of application for refund, not the date of withdrawal.
- (f) No application for refund will be considered if received after February 15th in the winter session or after July 31st in the summer session.

General Regulations

Classification of Students

Students, whether in the day or the evening division, are classified as *undergraduates* if they are properly matriculated for and proceeding to a degree or diploma; otherwise they are classified as *special students*. They are considered to be *full-time* students when enrolled for four or more subjects in an academic session, and *part-time* students when enrolled for fewer than four.

Attendance

A student is expected to attend all lectures, discussion groups, seminars and laboratory periods of any course in which he is registered, whether such periods of work are formally scheduled by the College Registrar or informally announced by the instructor.

Each instructor will determine for his own courses the relation of class attendance to course grades, and whether attendance records shall be kept. Early in the session he will inform his students of his practice in this regard.

The Senate may, at any time, either during the term or after the close of the term, request any student to withdraw from the College if his conduct, attendance, work or progress is deemed unsatisfactory.

Auditing

With the consent of the instructor concerned, an undergraduate in the day or evening division may audit courses concurrently with those being taken for credit, without the necessity of registering for or paying tuition for such audited courses.

Standing

A student's standing in his year's work will be determined not only by the results of mid-year and final examinations, but also by the work of the whole term or session, including consideration of class tests, laboratory work, essays, attendance, progress and any other matters bearing on the candidate's worth as a student of the College.

Except in the course leading to the Certificate in Engineering (see below), standing in each course is graded by the letters A, B, C, D (all unconditional passing grades) or F (failure). For the purpose of determining a student's average standing, a point value is assigned to each of these letter grades: A = 4, B = 3, C = 2, D = 1, F = 0.

To receive credit toward a degree a candidate must obtain at least a "D" grade in the work of each course. In order to receive second class standing in his year's work, a student must have obtained an average of

at least 2.4 grade points. In order to receive first class standing in his year's work, he must have obtained an average of at least 3.4 grade points. Additional regulations regarding required standing are stated in the outlines of the various degree programmes, pp. 39-63.

In the course leading to the Certificate in Engineering, the standing in each course is graded as I (first class standing, 80-100%), II (second class standing, 65-79%), III (third class standing, 50-64%) or "F" (failure, below 50%). To receive credit toward the Certificate a candidate must obtain a least third class standing in the work of each course.

A student whose term work is incomplete will be graded "F" in the course concerned unless special extension of the time allowed for completion of term work has been granted by the instructor.

A student may not withdraw *in good standing* from any subject for which he is registered, after February 15th in the winter session or July 31st in the summer session, except by permission of the Committee on Admission and Studies. When such permission is granted the student's record will show cancellation of the subject. If the student should withdraw from a subject without such permission, and fails to write the final examination, his record will show that he did not write the examination and he shall not have the privilege of writing a supplemental examination in that subject.

A candidate must obtain complete standing in the first year before registering in the third year, and complete standing in the second year before registering in the fourth year of any course.

A full-time student may take a summer session course for credit towards a degree only if such credit is needed to make up a deficiency. He may take a summer course as an extra for no degree credit.

Failure and Repetition

A student taking five or more subjects who fails in more than two subjects will be considered to have failed his year. Similarly, a student taking fewer than five subjects who fails in more than one subject will be considered to have failed his year. In either case the student will not be permitted to write further examinations in the failed subjects without repeating them, and will retain credit only in those subjects in which he obtained "C" or higher standing (in Engineering, "II" or higher).

A student who has failed his year at Carleton College or elsewhere may apply to the Committee on Admission and Studies for permission to repeat the year's work. If permission is granted he will be placed on probation for that academic year and must pass *all* subjects taken (at regular or supplemental examinations) in order to be restored to good standing. A student placed on probation in the evening division must pass

five courses in succession in order to regain good standing. If a student on probation does not qualify for restoration to good standing at the conclusion of the probationary period he will lose his status as an undergraduate. If after losing undergraduate status he should be permitted to enroll as a "special" student he may not take a full-time load, i.e. not as many as four full courses, in any one academic session.

Examinations

Mid-year examinations are held in all first-year and second-year lecture courses, and final examinations in all courses, at the times listed under The Academic Year, p. 3. With few exceptions, a single, joint examination is set for day and evening classes in the same subject—usually during morning or afternoon hours.

A student who fails to write the scheduled mid-year or final examinations in any course must make satisfactory explanation to the Committee on Admission and Studies not later than one week after the day on which the examination was held if he is to receive consideration for credit in the course in which the examination was missed, or permission to write a special examination.

A student who, because of illness, has failed to write the scheduled mid-year or final examination in any course may, upon presentation to the Committee on Admission and Studies of a satisfactory certificate from his attending physician or surgeon, apply for *aegrotat* standing or for permission to write a special examination.

Course grades are released only by the Registrar. Year-end reports are mailed to students as soon as possible after the release of grades has been authorized. Upon the request of a student, a duplicate of his report will be sent to his employer or another designated person.

Supplemental examinations. All supplemental examinations in courses taught during the winter session are held in August. Summer course supplemental examinations are written in December. For exact dates, see The Academic year, p. 3. Fees are shown on p. 22.

A student who fails a course primarily because of unsatisfactory laboratory or term work may be graded "F(ns)", meaning that he may not write a supplemental examination in that course. The privilege of writing supplemental examinations will be thus denied only in special cases and the student shall have the right of appeal to the Committee on Admission and Studies.

No supplemental examinations are given in courses beyond the first three courses of a major or minor subject for a degree with honours.

A student who does not write the final examination in any course is not eligible to write the supplemental examination in that course except by permission of the Committee on Admission and Studies.

If a supplemental examination is failed, the student will be required to repeat the course before coming up for examination in that course in any subsequent year.

A student who applies for and is granted permission to rewrite a subject for higher standing must do so within one calendar year after passing that subject. Students are advised that when they write supplemental examinations for the purpose of raising their standing the final grade assigned in any subject will be based on the whole year's work, including the supplemental, and that the grade obtained in the supplemental may be the grade retained even when it is lower than the grade derived from the previous regular examination.

Special examinations. A student who, for any reason, has not written a mid-year or final examination on the appointed date may be required, or may apply for permission, to take a special examination. Special examinations, and arrangements for taking them, may be authorized only by the Committee on Admissions and Studies. For fee, see p. 22.

Library Regulations

All persons taking courses in the College, and all graduates of the College, are entitled to use the library the year round.

During the winter session most books may be borrowed for one week, and renewed if not requested by another reader. If these books are not returned or renewed when due, a fine of 10c per day is charged. During the summer months most books may be borrowed for two weeks and no fines are charged.

Reserve books may not be renewed. If they are not returned when due, a fine of 25c for the first hour or part of an hour, and 10c for each hour or part of an hour thereafter, is charged.

Reference books may not be taken from the library.

Library Hours

Winter Session

Monday to Friday	8.45 a.m. to 10.15 p.m.
Saturday	8.45 a.m. to 12.30 p.m.

Summer Session

Monday to Thursday	<div> <div>9.00 a.m. to 12.30 p.m.</div> <div>2.00 p.m. to 5.00 p.m.</div> <div>6.45 p.m. to 9.45 p.m.</div> </div>
Friday	<div>9.00 a.m. to 12.30 p.m.</div> <div>2.00 p.m. to 5.00 p.m.</div>
Saturday	Closed all day.

Between sessions the library is open in the daytime only.

Details of Courses Offered

ARTS

Admission Requirements

(a) *To the First Year* of courses leading to the Bachelor of Arts degree:

Junior Matriculation—the Ontario Secondary School Graduation Diploma in the General Course (Grade XII), or an equivalent certificate*, with the required standing in the following subjects:

1. English.
2. Mathematics (Algebra and Geometry).
3. History.
4. A language other than English.
5. A Science (Physics and Chemistry; or Agricultural Science, Parts I and II) or an additional language.
6. Any *one* of: Music, Art, Home Economics, Commercial Work, Geography, Shop Work, Agriculture, an additional language.

*The following certificates, recognized as equivalent to the Ontario Secondary School Graduation Diploma, may be accepted for admission to first year if the subjects taken meet the requirements set out above:

Alberta.....	Junior Matriculation (Grade XI)
British Columbia.....	Junior Matriculation (Grade XII)
Manitoba.....	Grade XI
New Brunswick.....	Junior Matriculation
Newfoundland.....	Associate (Junior) or Grade XI (Academic)
Nova Scotia.....	Grade XI (average 60, minimum 50)
Prince Edward Island.....	First Class Licence; Second Year Certificate from Prince of Wales College; Grade XI
Quebec.....	The Quebec High School Leaving Certificate; McGill University Junior Matriculation
Saskatchewan.....	Grade XI

Mature Matriculation—A person over the age of twenty-one years who, though lacking the admission requirements specified above, can give evidence of the likelihood of success in university studies, may be admitted *on trial*. If he completes successfully the subjects of the first year his matriculation will be confirmed and he will be given credit for the year.

(b) *To the Second Year* of courses leading to the Bachelor of Arts degree:

Senior Matriculation—(1) Junior Matriculation or Mature Matriculation as prescribed above (on p. 37) and, in addition, (2) completion of first year, or attainment of the Ontario Secondary School Honour Graduation Diploma (Grade XIII) or an equivalent certificate** with required standing in the following five subjects:

1. English Composition and Literature.
2. Modern History or a similar course.
3. A science: Biology or Chemistry or Physics.
4. A language other than English.
5. Mathematics (two or three of Algebra, Geometry, Trigonometry) *or* an additional language.

No more than five senior matriculation subjects taken in a secondary school may be counted toward a Carleton degree.

An applicant who has complete Junior Matriculation and partial Senior Matriculation may be admitted and given credit for such Senior Matriculation subjects as are appropriate to the curriculum for the degree. He will be given an opportunity to make up his deficiencies as part of his programme in the College.

**The following certificates, recognized as equivalent to the Ontario Secondary School Honour Graduation Diploma in the subjects in which at least 50% has been made in each paper, may be accepted for admission to second year if the subjects taken meet the requirements set out above:

Alberta.....	Senior Matriculation (Grade XII)
British Columbia.....	Senior Matriculation (Grade XIII)
Manitoba.....	First Class; Grade XII
New Brunswick.....	Grammar School Licence; First Class Licence
Newfoundland.....	Associate (Senior)
Nova Scotia.....	Grade XII
Prince Edward Island.....	Honour Diploma of Third Year, Prince of Wales College
Quebec.....	Senior High School Leaving Certificate; McGill University Senior Matriculation
Saskatchewan.....	Grade XII

(c) *To the Third or subsequent years* of courses leading to the Bachelor of Arts degree:

Applications for admission to the third or subsequent years will be evaluated on their merits and advanced standing granted for studies undertaken elsewhere only when these are recognized as the equivalent of subjects offered in Carleton College.

Every student will be required to complete at least his last five courses in Carleton College.

Course Requirements

● *Bachelor of Arts — Pass Course* (Offered in both day and evening divisions).

Length of course. Candidates for the Pass B.A. degree will take a total of twenty courses after Junior Matriculation, or fifteen after Senior Matriculation.

In the day division five courses will be taken in each of four years. No more than five courses may be taken for credit in any academic year, unless by permission of the Committee on Admission and Studies.

In the evening division students may take one or two courses in each winter session and one course in each summer session. No more than two courses may be taken for credit in a winter session and no more than one in a summer session, unless by permission of the Committee on Admission and Studies.

Course selection. The Pass B.A. course is designed to provide opportunity for a liberal education, including specialization in one subject of study, called a *major*. The choice of a major will normally be made upon entry to the second year, in consultation with the department or departments concerned. A *major* may be taken, with the consent of the department concerned, in any subject listed in Group A below. A *combined major* in two related subjects may be taken, with the consent of the departments concerned, provided that at least one of the subjects is chosen from Group A. The other may be chosen from Group B.

For 1952-53 subjects are tentatively classified as follows:

Group A—Biology (Botany, Zoology), Chemistry, Classics (Latin, Greek), Economics, English, French, History, Mathematics, Philosophy, Physics, Political Science, Psychology, Sociology.

Group B—Fine Arts, Geography, Geology, German, Public Law, Russian, Spanish.

Courses will be selected from those listed under Details of Subjects, pp 63ff., as follows:

FIRST YEAR

1. English 110 and 120.
2. History 110.
3. A science: Biology 110 or Chemistry 110 or Physics 110.
4. A language other than English (a course numbered between 100 and 199).
5. Two or three of Mathematics 110, 111, 112
or one of French 110, German 51 or 110, Greek 51 or 110,
Latin 51 or 110, Russian 51 or 110, Spanish 110. (Credit
for a language course numbered between 50 and 99 is
granted only after a further course in the language has
been passed.

SECOND YEAR

1. A course in English literature: English 210 or 220. (English 110 also may be required.)
2. An introduction to problems of thought and conduct: Philosophy 210.
3. An introduction to the study of contemporary society: One of Economics 210, History 220, Political Science 210, Sociology 210.
4. } Two of:
5. } (a) A language other than English (a course numbered
between 200 and 299).
(b) Mathematics 210.
(c) A science, chosen from Biology, Chemistry, Geology,
Physics (either a further course in a science already
taken or a first course in another science.)

THIRD AND FOURTH YEARS

A total of ten courses, five in each year: a minimum of four, (five, if one is not taken in second year) in the student's major, the others to be chosen with the approval of the department in which the major is taken, or of the departments in the case of a combined major.

Note: Students admitted to the B.A. course in 1952 and subsequently will be governed by the above prescription of course selection. Those who were admitted to the course prior to 1952 are encouraged to transfer to the new curriculum if transfer is feasible, but have the option of continuing to be governed by the regulations stated at the time of their matriculation to the course.

Standing. General regulations regarding standing are stated on p. 35. In addition, candidates for the Pass B.A. degree must obtain an average of at least 1.5 grade points in the courses taken in Carleton College. If after the regular examinations in any year a student's cumulative grade-point average is below 1.5 he is advised to raise his grades in some subjects by writing supplemental examinations.

- *Bachelor of Arts with General Honours*

- *Bachelor of Arts with Specific Honours*

Effective 1952 these two programmes were replaced by that leading to the degree of Bachelor of Arts with Honours, described below. Students admitted to General Honours or Specific Honours prior to 1952 will be governed by the regulations in effect at the time of their classification as honours students.

- *Bachelor of Arts with Honours* (First two years offered in both day and evening divisions; last three years offered in day division only)

This course is characterized by strict prescription of studies and high standards of performance, more especially within those departments in which major and minor subjects have been selected.

Additional admission requirements. Admission to Honours will be granted only with the consent of the department in which the major subject is to be taken. Students who have attained at least second class standing in the work of the second year of the Pass Course may be admitted to the third year of an Honours Course. No student carrying a "condition" in the Pass Course will be admitted to an Honours Course.

Length of course. Candidates for the degree B.A. with Honours will ordinarily take twenty-five courses in five years if admitted by Junior Matriculation, or twenty courses in four years if admitted by Senior Matriculation. Attendance at seminars and the completion of special assignments may also be required.

Course selection. A candidate for Honours, must before registering in his third year, choose a major subject and a minor subject, and in these major and minor subjects must take such courses as may be determined by the head of the department in which he is to pursue the work of his major.

The whole course of a candidate for an Honours degree must be in the beginning discussed with, and thereafter at every stage be approved by, the head of the department in which the candidate chooses his major subject or field of study.

Honours majors are now available in Public Administration (see p. 44), Political Science, History, Economics, and English. Other majors

will be made available in subsequent years. A programme of Combined Honours may be arranged by permission of the Committee on Honours.

Standing. General regulations regarding standing are stated on p. 33. Additional regulations regarding the standing of candidates for an Honours degree are as follows.

A student's honours standing in any year's work will be determined by the Committee on Honours.

To receive credit towards an Honours degree a candidate must obtain at least second class standing on the year's work.

Students who fail to maintain honours standing in any year must withdraw from the Honours Course. Such students may apply for admission to the Pass Course.

At graduation a student's honours standing is determined, on the basis of his entire record, as First Class, High Second Class, or Second Class.

PUBLIC ADMINISTRATION

ADVISORY COUNCIL ON PUBLIC ADMINISTRATION STUDIES

O. E. Ault, Director of Personnel Selection, Civil Service Commission of Canada

C. H. Bland, Chairman, Civil Service Commission of Canada

R. B. Bryce, Assistant Deputy Minister of Finance, and Secretary to the Treasury Board

G. F. Davidson, Deputy Minister of National Welfare, and Past President of the Institute of Public Administration of Canada

R. A. MacKay, Head of Defence Liaison Division, Department of External Affairs

C. D. Wight, Director of Planning and Development, City of Ottawa

M. M. MacOdrum, President, Carleton College

Donald C. Rowat, Assistant Professor of Political Science, Carleton College

James A. Gibson, Dean, Carleton College

E. F. Sheffield, Registrar, Carleton College

The rapid growth in government services during the last half century has increased the responsibilities and complicated the problems of public employees. The realization has been growing, therefore, that public administrators, either federal, provincial or municipal, can profit from a special type of education. Carleton College has been attempting to meet this need by offering programmes of study as preparation for public administration.

At present there are three such programmes, one leading to a Bachelor of Arts degree with Honours in Public Administration, one to an undergraduate Certificate in Public Service Studies, and the other to a graduate Diploma in Public Administration.

The degree programme is built on the assumption that the most suitable education for a person desiring to be a capable public administrator is broad and general in base, with specialization at a later stage. While it is designed to be of particular use to students contemplating careers in public employment, it also provides a sound general education for those considering the legal profession or business. The certificate and diploma programmes, on the other hand, will be most helpful to those who already have a broad background and who desire training in the fields directly related to public administration. Details of these programmes are given below.

Public employees not interested in registering for studies leading to a degree, a certificate or a diploma should note that, with the permission of the Department, they may take, as *special students*, any course in Political Science or Public Administration in which they may be interested (see pages 111-113). Their attention is directed also to non-credit extension courses related to public administration which are offered from time to time by the College.

Since Carleton College is located in the capital city and enjoys close relations with many government agencies, students of public administration may profit greatly from the unique advantages thus offered.

- *Bachelor of Arts with Honours in Public Administration* (First two years offered in both day and evening divisions; last three years offered in day division only)

Course Requirements

Candidates for the degree of Bachelor of Arts with Honours in Public Administration must satisfy all requirements for the degree of B.A. with Honours, as outlined above, p. 41.

Course selection. The work of this course involves prescribed studies in Political Science, History, Economics and Public Law, as follows:

FIRST AND SECOND YEARS

Students intending to enter Honours Public Administration in the third year will take the courses prescribed for the Pass B.A. in the first and second years (see p. 40). They are advised, however, to include Political Science 210 (Introduction to Political Science) in the second year, and by the end of that year they should have a reading knowledge of French.

THIRD YEAR

1. Political Science 310 (Comparative Government)
2. Economics 210 (Principles of Economics)
3. History 330 (Canada from 1791)
or History 360 (The Economic Development of Canada)
4. Political Science 340 (Introduction to Public Administration)
or Public Law 310 (Elements of Public Law)
5. One of: English, Philosophy, Sociology, Accounting, Mathematics, Geography, Psychology.

FOURTH YEAR

1. Political Science 360 (Political Thought)
or Political Science 355 (Seminar in Public Administration)

2. Political Science 320 (Seminar in Canadian Government)
or Political Science 350 (Seminar in Public Administration,
Provincial and Municipal)
3. Economics 310 (Money and Banking)
or Economics 345 (Public Finance and Fiscal Policy)
4. Public Law 310 (Elements of Public Law)
or Public Law 320 (Administrative Law)
5. One of: English, Philosophy, Psychology, Accounting, Mathematics, History, Sociology, Geography

FIFTH YEAR

1. Political Science 360 (Political Thought)
or Political Science 355 (Seminar in Public Administration)
2. Political Science 320 (Seminar in Canadian Government)
or Political Science 350 (Seminar in Public Administration,
Provincial and Municipal)
3. Public Law 320 (Administrative Law)
or Political Science 340 (Introduction to Public Administration)
4. } Two of: Economics 340 (International Trade), Economics 310
5. } (Money and Banking), Economics 345 (Public Finance and Fiscal
Policy), Economics 350 (Economic Policy), Economics 320
(Statistical Methods in the Social Sciences), Economics 355
(Labour Economics and Industrial Relations), Psychology 340
(Personnel Psychology), Political Science 390 (Seminar in
Political Research. If this course is chosen the student must submit
a thesis on a special topic chosen in consultation with his adviser)
6. One of: English, Philosophy, Psychology, Accounting, Mathematics, History, Sociology, Geography

- *Bachelor of Public Administration*
- *Bachelor of Arts with Certificate in Public Administration*
- *Diploma in Public Service Studies*

These courses are no longer offered to beginning students. Students already matriculated for one of them may continue according to their original plans, or may, if qualified, transfer to one of the revised programmes of public administration studies.

- *Certificate in Public Service Studies* (Offered in evening division only)

This course is designed primarily for public employees who seek special training in public service subjects at the undergraduate level.

Subjects taken for the Certificate may be credited toward a degree, but a student must complete at least five of the subjects required for the degree *after* the award of the Certificate.

Admission requirements. Junior matriculation (see p. 37), but the cases of applicants without junior matriculation will be considered on their merits by the Committee on Public Administration which may require the completion of certain subjects at Carleton before admission. Candidates may be admitted with advanced standing but must complete at least five courses for the Certificate in Carleton College.

Course requirements. The following courses are required and the following order is suggested:

1. Political Science 210 (Introduction to Political Science)
2. Economics 210 (Principles of Economics)
3. History 330 (Canada from 1791)
or History 360 (The Economic Development of Canada)
4. Political Science 340 (Introduction to Public Administration)
5. Political Science 320 (Seminar in Canadian Government)
or Political Science 350 (Seminar in Public Administration,
Provincial and Municipal)
or Public Law 310 (Elements of Public Law)
6. One other, chosen in consultation with the Department according to the needs of the student

Standing. Candidates for the Certificate must obtain an average of at least 1.5 grade points in the courses taken at Carleton.

- *Graduate Diploma in Public Administration* (Offered in both day and evening divisions)

This course is designed for those in or planning to enter the public service who already have a university degree but desire further training in the fields directly related to public administration.

Admission requirements. A bachelor's degree from a recognized college or university, including (with better than average standing) the following undergraduate courses or their equivalents:

- a. Political Science 210 (Introduction to Political Science)
or Political Science 310 (Comparative Government)
- b. Economics 210 (Principles of Economics)
- c. History 330 (Canada from 1791)
or History 360 (The Economic Development of Canada)
- d. Two other courses, approved by the Department, in Political Science, Economics, Sociology, Psychology, History, or Philosophy.

An applicant who lacks one or more of these prerequisite courses may make up his deficiencies in the College. In exceptional cases certain of the prerequisites may be waived.

Course requirements. Five courses:

1. Political Science 340 (Introduction to Public Administration)
2. Political Science 320 (Seminar in Canadian Government)
or Political Science 350 (Seminar in Public Administration,
Provincial and Municipal)
or Public Law 310 (Elements of Public Law)
3. Political Science 360 (History of Political Thought)
4. Political Science 355 (Seminar in Public Administration)
or Public Law 320 (Administrative Law)
5. One other, chosen in consultation with the Department according to the needs of the student (preferably from the following: Economics 310, 320, 335, 340, 345, 350; Psychology, 340; History 343, 373, 380; Political Science 310, 320, 340, 355, 370, 375; Public Law 310, 320).

All five courses for the Diploma must be taken in Carleton College. If a student has already taken any of these courses (or their equivalents) in qualifying for admission to the Diploma programme, he must substitute others from the options listed in Item 5 above.

Standing. Candidates for the Diploma must obtain an average of at least second class standing (2.4 grade points) in the five courses counted for the Diploma.

JOURNALISM

ADVISORY COUNCIL ON JOURNALISM

R. Warren Baldwin, Ottawa Editor, *The Financial Post*.
Clyde Blackburn, Ottawa Superintendent, *The Canadian Press*.
D'Arcy Finn, Executive Editor, *The Ottawa Citizen*.
Blair Fraser, Ottawa Editor, *Maclean's Magazine*.
Maurice Jefferies, Chief of Ottawa Bureau, *The Windsor Daily Star*.
Douglas Leechman, author and journalist.
Norman M. MacLeod, Ottawa Chief of Bureau, *The British United Press*.
F. C. Mears, Ottawa Chief of Bureau, *The Montreal Gazette*.
Robert McKeown, of the Ottawa Bureau, *The Montreal Standard*.
I. Norman Smith, Associate Editor, *The Ottawa Journal*.

M. M. MacOdrum, President, Carleton College.

Wilfrid Eggleston, Director of Journalism, Carleton College.

James A. Gibson, Dean, Carleton College.

E. F. Sheffield, Registrar, Carleton College.

- *Bachelor of Journalism* (First two years offered in both day and evening divisions; last two years offered in day division only)

The course in Journalism is built around the conviction that the best college training for the career of journalist today consists of a good liberal arts education, combined with thorough training in the technical skills of interviewing, reporting, writing and editing. In the United States, with its much longer tradition in education for journalism, the tendency in four-year schools of journalism is to arrange courses so that students spend seventy-five to eighty per cent of their time in acquiring a good background, and only twenty to twenty-five per cent in technical courses. The result, says Frank Luther Mott, Dean Emeritus of the University of Missouri School of Journalism, is to give such students "a mind trained and ripened by the liberal discipline—the social sciences, philosophy, mathematics, languages and so on."

While the education of a journalist must stress the art and science of communication (through the spoken as well as the written word), the importance of a writer having something to communicate cannot be neglected. The good newspaperman is noted for his ability to get information and to see the value of the facts he gets.

The course in Journalism at Carleton College emphasizes liberal scholarship and basic skills, in the belief that there are few practical applications of a specialized nature which cannot be subsequently acquired in a few weeks of actual work. While an array of "shop" courses in practical vocational training might appear to give more immediately useful crafts to the prospective journalist, it is assumed that no amount

of "shop" training will carry a "cub" far if he lacks a broad background of liberal education and the intelligence to grasp and report the complex phenomena of modern society.

The opportunities in the national capital for the training of newspapermen and women are exceptional. The members of the parliamentary press gallery and staffs of the Ottawa newspapers, the press attachés of diplomatic missions, the public relations officers of government departments, and headquarters personnel of national associations are among the resources from which Carleton College can draw for guest lecturers and teaching material. Ottawa is the repository and headquarters of information upon almost every conceivable national topic. It is rich in cultural life. It is not going too far to say that residence for two or three years in the national capital can of itself be an education to anyone who purposes to make writing his or her career.

Admission Requirements

(a) *To the First Year* of the course leading to the Bachelor of Journalism degree:

Requirements are the same as those for admission to the first year of courses leading to the Bachelor of Arts degree (see p. 37).

(b) *To the Second Year* of the course leading to the Bachelor of Journalism degree:

Senior Matriculation—(1) Junior Matriculation or Mature Matriculation as prescribed above (on p. 37) and, in addition, (2) completion of first year, or attainment of the Ontario Secondary School Honour Graduation Diploma (Grade XIII) or an equivalent certificate (see p. 38) with required standing in the following five subjects:

1. English Composition and Literature.
2. Modern History or a similar course.
3. A science: Biology or Chemistry or Physics.
4. A language other than English.
5. Mathematics (two or three of Algebra, Geometry, Trigonometry)
or Latin.

No more than five senior matriculation subjects taken in a secondary school may be counted toward a Carleton degree.

An applicant who has complete Junior Matriculation and partial Senior Matriculation may be admitted and given credit for such Senior Matriculation subjects as are appropriate to the curriculum for the degree. He will be given an opportunity to make up his deficiencies as part of his programme in the College.

(c) *To the Third and Fourth Years* of the course leading to the Bachelor of Journalism degree:

Undergraduates applying for admission to advanced standing with allowances on credits gained at their original college or university may be admitted to the third or fourth year, if their academic record is accepted as at least equivalent to the completion of second or third year Journalism in Carleton College. Normally, such applicants should offer standing in at least two of the following subjects in their previous work: Canadian History, Psychology, Economics, Political Science. Credit for courses previously taken will be arranged on application, subject to the stipulation that a minimum of a full year's work of at least the last five courses must be taken at Carleton College in order to qualify for the Bachelor of Journalism degree.

(d) *To the B.J. Course as a post-graduate year:*

The holder of a bachelor's or master's degree in Arts, Science or Commerce may be permitted to enroll in the five Journalism subjects normally taught in the third and fourth years (Journalism 310, 320, 330, 340, 350), and thus qualify for the degree Bachelor of Journalism in one academic year. He may be required to take, in addition, certain of the courses in the liberal arts which are prescribed for undergraduates in Journalism, if the pattern of his previous studies is deficient in such background.

NOTE: Journalism students are urged to become reasonably proficient on the typewriter as soon as possible. All assignments in the courses Journalism 310, 320, 330, 340 and 350 (which are taken in the third and fourth years) will be done by typewriter.

Course Requirements

Length of course. Candidates for the Bachelor of Journalism degree must take a total of twenty courses in four years if admitted by Junior Matriculation, or fifteen courses in three years if admitted by Senior Matriculation.

Not more than five courses may be taken for credit in any academic year, unless by permission of the Committee on Admission and Studies.

Course Selection. The course leading to the degree of Bachelor of Journalism will consist of subjects selected from those listed under Details of Subjects, pp. 63 ff., as follows:

FIRST YEAR

1. English 110 and 120.
2. History 110
3. A science: Biology 110 or Chemistry 110 or Physics 110

4. French 110 or a course numbered between 100 and 199 in another language
5. Two or three of Mathematics 110, 111, 112
or Latin 110

SECOND YEAR

1. English 210
(English 110 may also be required)
2. A further course in the language taken in first year
3. History 230
4. Philosophy 210 (which must be taken in third year if not in second)
or Psychology 210
5. One of: Economics 210, Political Science 210, Sociology 210
6. Journalism 210 (non-credit course)

THIRD YEAR

1. Journalism 310
2. Journalism 320
3. History 330
4. An approved option* (Philosophy 210, if not already taken)
5. An approved option*

FOURTH YEAR

1. Journalism 330
2. Journalism 340
3. Journalism 350
4. An approved option*
5. An approved option*

*The subjects which will be recommended to students for their choice of options will be drawn from the following: Political Science, Economics, Sociology, Philosophy, Canadian Geography, History, English, Social Psychology, French.

Standing. General regulations regarding standing are stated on p. 33. In addition, candidates for the B.J. degree must obtain an average of at least 1.5 grade points in the courses taken in Carleton College and grades of "C" or better in *each* of Journalism 330, 340 and 350. If after the regular examinations in any year a student's cumulative grade-point average is below 1.5 he is advised to raise his grades in some subjects by writing supplemental examinations.

COMMERCE

● *Bachelor of Commerce* (Offered in both day and evening divisions)

The course leading to the degree of Bachelor of Commerce is designed primarily to provide an education with some specialization in subjects which should be of greatest interest and value to those looking forward to a business career. Because the aims of students differ widely, and because specific training can be gained more effectively in business itself than in academic courses, the Commerce course contains no specialized training in the techniques of business management and administration.

The course is based upon the conviction that a person who has learned to think and to express himself clearly and coherently has received the best preparation for responsible citizenship and business leadership in the modern world. The objective of the Commerce course is, therefore, to provide the maximum opportunity for rigorous, critical and imaginative thinking by the student under the guidance and direction of the members of the Faculty.

Students who, after achieving the B.Comm. degree, intend to proceed to professional accounting degrees—Chartered Accountant (C.A.), Certified Public Accountant (C.P.A.), Certified General Accountant (C.G.A.), or Registered Industrial and Cost Accountant (R.I.A.)—should consult the head of the Accounting Department before entering the final year of the Commerce course. Any other students who are interested in professional accounting careers are referred to the special circular covering the various accounting degree-granting bodies. These students also may wish to consult the head of the Accounting Department.

Admission Requirements

(a) *To the First Year* of the course leading to the Bachelor of Commerce degree:

Requirements are the same as those for admission to the first year of courses leading to the Bachelor of Arts degree (see p. 37).

(b) *To the Second Year* of the course leading to the Bachelor of Commerce degree:

Senior Matriculation—(1) Junior Matriculation or Mature Matriculation as prescribed above (on p. 37) and, in addition, (2) completion of first year, or attainment of the Ontario Secondary School Honor Graduation Diploma (Grade XIII) or an equivalent certificate (see p. 38) with required standing in the following five subjects:

1. English Composition and Literature
2. Modern History or a similar course

3. A science: Biology or Chemistry or Physics
4. A modern language other than English
5. Mathematics (Algebra, Geometry and Trigonometry)

No more than five senior matriculation subjects taken in a secondary school may be counted toward a Carleton degree.

An applicant who has complete Junior Matriculation and partial Senior Matriculation may be admitted and given credit for such Senior Matriculation subjects as are appropriate to the curriculum for the degree. He will be given an opportunity to make up his deficiencies as part of his programme in the College.

(c) *To the Third and Fourth Years* of the course leading to the Bachelor of Commerce degree:

Applications for admission to the third or fourth years will be evaluated on their merits and advanced standing granted for studies undertaken elsewhere only when these are recognized as the equivalent of subjects offered in Carleton College. (See also regulations regarding standing, p. 54.)

Every student will be required to complete at least his last five courses in Carleton College.

Course Requirements

Length of course. Candidates for the Bachelor of Commerce degree must take a total of at least twenty courses after Junior Matriculation or fifteen after Senior Matriculation.

In the day division at least five courses will be taken in each of four years. No more than five courses (except in second year when $5\frac{1}{2}$ are required) may be taken for credit in any academic year, unless by permission of the Committee on Admission and Studies.

In the evening division students may take one or two courses in each winter session and one course in each summer session. No more than two courses may be taken for credit in a winter session and no more than one in a summer session, unless by permission of the Committee on Admission and Studies.

Course selection. Courses will be selected from those listed under Details of Subjects, pp. 63 ff., as follows:

FIRST YEAR

1. English 110 and 120
2. History 110
3. A science: Biology 110 or Chemistry 110 or Physics 110
4. French 110 or a course numbered between 100 and 199 in another modern language
5. Mathematics 110, 111 and 112

SECOND YEAR

1. English 210 {Both must be taken }
 or Philosophy 210 { before graduation. }
2. A further course in the modern language taken in first year
 or a science: Biology, Chemistry, Geology or Physics
3. Economics 210
4. Commercial Law 210
5. Accounting 210
6. Mathematics 220 (half course)

THIRD YEAR

1. Economics 310
2. Economics 315
3. Economics 320
4. Accounting 310
5. A course in English, History, Philosophy, Political Science,
 or Sociology

FOURTH YEAR

Five full courses chosen as follows:

1. One of: Economics 365, 370, 375
2. One or two of: History, Philosophy, Political Science,
 Sociology
3. Two or three of: Accounting, Economics, Mathematics,
 Psychology, Public Law. (Under certain circumstances
 courses in other fields may be taken with permission of the
 Committee on Commerce Studies.)

Standing. General regulations regarding standing are stated on p. 33. In addition, a candidate for a degree in Commerce who fails to secure an average of at least 1.6 grade points in the first or second year or 1.8 in the third or fourth year will be required to withdraw from the Commerce course. Such students may apply for admission to the Pass B.A. course and if accepted must fulfil the requirements of that course in order to qualify for the Pass B.A. degree.

SCIENCE

Admission Requirements

(a) *To the First Year* of courses leading to the Bachelor of Science degree:

Requirements are the same as those for admission to the first year of courses leading to the Bachelor of Arts degree (see p. 37).

(b) *To the Second Year* of courses leading to the Bachelor of Science degree:

Senior Matriculation—(1) Junior Matriculation or Mature Matriculation as prescribed above (on p. 37) and, in addition, (2) completion of first year, or attainment of the Ontario Secondary School Honour Graduation Diploma (Grade XIII) or an equivalent certificate (see p. 38) with regard standing in the following five subjects:

1. English Composition and Literature
2. Mathematics (Algebra, Geometry and Trigonometry)
3. A language other than English
4. } Two of: Physics, Chemistry, Biology
5. }

No more than five senior matriculation subjects taken in a secondary school may be counted toward a Carleton degree.

An applicant who has complete Junior Matriculation and partial Senior Matriculation may be admitted and given credit for such Senior Matriculation subjects as are appropriate to the curriculum for the degree. He will be given an opportunity to make up his deficiencies as part of his programme in the College.

(c) *To the Third or subsequent years* of courses leading to the Bachelor of Science degree:

Applications for admission to the third or subsequent years will be evaluated on their merits and advanced standing granted for studies undertaken elsewhere only when these are recognized as the equivalent of subjects offered in Carleton College.

Every student will be required to complete at least his last five courses in Carleton College.

Course Requirements

- *Bachelor of Science — Pass Course* (Offered in both day and evening divisions)

Length of course. Candidates for the Pass B.Sc. degree will take a total of twenty courses after Junior Matriculation, or fifteen after Senior Matriculation.

In the day division five courses will be taken in each of four years. No more than five courses may be taken for credit in any academic year unless by permission of the Committee on Admission and Studies.

In the evening division students may take one or two courses in each winter session and one course in each summer session. No more than two courses may be taken for credit in a winter session and no more than one in a summer session, unless by permission of the Committee on Admission and Studies.

Course selection. The Pass B.Sc. course affords opportunity to specialize in one science subject, called a *major*, and to a lesser extent in a second subject, called a *minor*. The choice of a major normally will be made upon entry to the second year, in consultation with the department concerned.

For 1952-53, subjects in which majors may be taken are: Biology (Botany, Zoology), Chemistry, Mathematics, Physics.

Courses will be selected from those listed under Details of Subjects, pp. 63ff., as follows:

FIRST YEAR

1. English 110 and 120
2. Mathematics 110, 111 and 112
3. A language other than English (a course numbered between 100 and 199)
4. } Two of: Biology 110, Chemistry 110, Physics 110
5. }

SECOND YEAR

1. One of: Classical Civilization 275, English 210, Philosophy 210
2. Mathematics 210
3. } Three of:
4. } (a) Biology 110 or Botany 210 or Zoology 220
5. } (b) Chemistry 210
- (c) Geology 210
- (d) Physics 210

THIRD AND FOURTH YEARS

A total of ten courses, five in each year: normally at least four more courses in the student's major, at least two in a minor field, and at least one course each year chosen from subjects other than the natural sciences and mathematics. The programme of each student in the third and fourth years is under the direct supervision of a full-time member of the department in which he takes his major.

Before graduation the candidate for the B.Sc. degree will be required to show that he has a reading knowledge of French or German (preferably both). This will be tested, during the fourth year, by the department in which he is taking his major.

Note: Students admitted to the B.Sc. course in 1952 and subsequently will be governed by the above prescription of course selection. Those who entered the course prior to 1952 are encouraged to transfer to the new curriculum if transfer is feasible, but have the option of continuing to be governed by the regulations stated at the time of their matriculation to the course.

Standing. General regulations regarding standing are stated on p. 33. In addition, candidates for the Pass B.Sc. degree must obtain an average of at least 1.5 points in the courses taken in Carleton College. If after the regular examinations in any year a student's cumulative grade-point average is below 1.5 he is advised to raise his grades in some subjects by writing supplemental examinations.

● *Bachelor of Science with Specific Honours*

Effective 1952 this programme was replaced by that leading to the degree Bachelor of Science with Honours, described below. Students admitted to Specific Honours prior to 1952 will be governed by the regulations in effect at the time of their classification as honours students.

● *Bachelor of Science with Honours* (First two years offered in both day and evening divisions; last three years in day division only)

The Honours Course is characterized by strict prescription of studies and high standards of performance, more especially in those departments in which major and minor subjects have been selected.

Additional admission requirements. Admission to Honours will be granted only with the consent of the department in which the major subject is to be taken. Students who have attained at least second class standing in the second year of the Pass Course may be admitted to the third year of an Honours Course. No student carrying a "condition" in the Pass Course will be admitted to an Honours Course.

Length of Course. Candidates for the degree of B.Sc. with Honours will ordinarily take twenty-five courses in five years if admitted by Junior Matriculation, or twenty courses in four years if admitted by Senior Matriculation. Attendance at seminars and the completion of special assignments may also be required.

Course selection. A candidate for Honours must, before registering in his third year, choose a major subject and a minor subject. and in these major and minor subjects must take such courses as may be

determined by the head of the department in which he is to pursue the work of his major.

The whole course of a candidate for an Honours degree must be in the beginning discussed with, and thereafter at every stage be approved by the head of the department in which the candidate chooses his major subject or field of study.

Honours majors are now available in Biology, Chemistry, Mathematics, Physics, and Applied Physics (see below). Other majors will be made available in subsequent years. A programme of Combined Honours may be arranged by permission of the Committee on Honours.

Standing. General regulations regarding standing are stated on p. 33. Additional regulations regarding the standing of candidates for an Honours degree are as follows.

A student's honours standing in any year's work will be determined by the Committee on Honours.

To receive credit towards an Honours degree a candidate must obtain at least second class standing on the year's work.

Students who fail to maintain honours standing in any year must withdraw from the Honours Course. Such students may apply for admission to the Pass Course.

At graduation a student's honours standing is determined, on the basis of his entire record, as First Class, High Second Class, or Second Class.

● *Bachelor of Science with Honours in Applied Physics* (Offered in day division only)

The course leading to the degree of Bachelor of Science with Honours in Applied Physics is designed to serve students whose interest is in engineering research.

Special admission requirements. Admission to this course is open to students who have qualified in the two-year certificate course in Engineering (see p. 59) or the equivalent, with at least second class standing.

Length of course. Candidates for this degree will take a minimum of ten courses in two years following completion of the two-year course in Engineering (making a total of five years from Junior Matriculation or four years from Senior Matriculation).

Course selection. Courses will be selected in consultation with the head of the Physics department.

Standing. The regulations regarding standing in courses leading to the degree of Bachelor of Science with Honours apply. (See above).

ENGINEERING

● *Certificate in Engineering* (Offered in day division only)

Studies offered in Applied Science and Engineering cover the first two years of a four-year Engineering course and require Senior Matriculation or the equivalent for admission. The first year course is common to all branches of engineering. The second year is divided into two groups: Course A is for students intending to specialize in Civil, Mechanical or Electrical Engineering; Course B is for students intending to specialize in Chemistry, Chemical Engineering, Mining, Metallurgy or Geology.

Students completing the Engineering course at Carleton College may, if recommended, be admitted to the third year of Engineering courses at another university, e.g., McGill University, Queen's University or (in certain courses) The University of Toronto, where they may qualify in two additional years for a degree in Engineering.

Alternatively, students completing the Engineering course at Carleton College may transfer to the course leading to the degree of Bachelor of Science with Honours in Applied Physics, which involves two additional years of study in Carleton College. (See p. 58).

Admission Requirements

(a) *To the First Year* of the course leading to the Certificate in Engineering:

Junior Matriculation—Effective in 1953, junior matriculation requirements will be the same as those for admission to the first year of courses leading to the Bachelor of Arts degree (see p. 37).

Senior Matriculation—In addition, a candidate for admission to the first year of the course leading to the Certificate in Engineering must have passed the examinations of the first year of the Bachelor of Science course in Carleton College (see p. 56), or of Ontario Grade XIII, or the equivalent examinations (see p. 38) of other recognized examining bodies in the following subjects:

1. English Composition and Literature
2. Mathematics (Algebra, Geometry, including Analytic Geometry, and Trigonometry). (Preference will be given to students having second class standing or better.)
3. One of: Latin, Greek, French, German, Spanish, Italian, History, Biology (Botany and Zoology)
(Students intending to proceed to The University of Toronto in the Faculty of Applied Science and Engineering should choose a language.)
4. Physics
5. Chemistry

(b) *To the Second Year* of the course leading to the Certificate in Engineering:

Students who have successfully completed the work of first year Engineering in Carleton College, or equivalent work elsewhere, may apply for admission to the second year.

Course Requirements

Length of Course. Candidates for the Certificate in Engineering will take a course covering two years of study after Senior Matriculation or after the first year of the B.Sc. course.

Course selection. Courses will be selected from those listed under Details of Subjects, pp. 63 ff., as follows:

FIRST YEAR

Common to all branches of Engineering

SUBJECT	Lecture Hours Per Week		Laboratory Hours Per Week	
	First Term	Second Term	First Term	Second Term
Chemistry 215 (Elementary Physical Chemistry).....	3	3	0	0
Economics 290 (Economics for Engineers, I)	1	0	0	0
Engineering 210 (Mechanics).....	2	2	2	2
Engineering 220 (Mechanical Drawing I)....	0	0	6	6
Engineering 230 (Surveying).....	1	1	*	3
Engineering 235 (Surveying Field Work)....	(Four weeks, April-May)			
Engineering 240 (Engineering Problems I)...	0	0	3	3
English 230 (English for Engineering Students).....	2	2	0	0
Mathematics 210 (Calculus).....	3	3	0	0
Mathematics 240 (Geometry and Spherical Trigonometry).....	3	0	0	0
Mathematics 245 (Algebra).....	0	3	0	0
Physics 210 (General Physics).....	3	3	3	3
	18	17	14	17

*Three days' field work at the commencement of the term.

SECOND YEAR—COURSE A
Civil, Mechanical and Electrical Engineering

SUBJECT	Lecture Hours Per Week		Laboratory Hours Per Week	
	First Term	Second Term	First Term	Second Term
Chemistry 315 (Chemistry of Engineering Materials).....	2	2	0	0
Economics 305 (Economics for Engineers, II)	1	1	0	0
Engineering 310 (Applied Mechanics).....	2	2	2	2
Engineering 320 (Mechanical Drawing II)...	0	0	3	3
Engineering 330 (Surveying & Mapping II)	1	1	3	0
Engineering 340 (Engineering Problems II)	0	0	1	2
Engineering 350 (Descriptive Geometry)....	0	0	2	2
Engineering 360 (Materials of Engineering)	1	2	0	0
Engineering 370 (Mechanics of Machines)...	2	0	2	0
Engineering 380 (Heat Engines, Elementary).....	0	1	0	0
Engineering 390 (Public Speaking for Engineers).....	0	0	0	1
Geology 210 (General Geology).....	2	2	2	2
Mathematics 310 (Differential and Integral Calculus).....	3	3	0	0
Physics 305 (Electricity).....	3	3	3	3
	17	17	18	15

SECOND YEAR—COURSE B
 (See next page)

Standing. The standing in each course is graded as I (first class standing, 80-100%), II (second class standing, 65-79%), III (third class standing, 50-64%) or "F" (failure, below 50%). To receive credit toward the Certificate in Engineering a candidate must obtain at least third class standing in the work of each course. A student who fails more than one supplemental examination is considered to have failed his year.

Special Requirements

All Engineering students should consult the calendar of the particular university in which they desire to continue their studies in the third and fourth years.

Summer school. Students proceeding to third year Engineering at another university will be required to attend the appropriate summer school prior to entry to the third year.

Practical experience. It is necessary that Engineering students shall have practical experience in engineering work (experience which may be obtained in summer jobs) and they must submit a record of this signed by their employers. Suitable forms are available from the Registrar's Office.

Summer essays. Summer essays on topics drawn from the practical experience of the student during his summer work must be submitted at the beginning of the fall term.

SECOND YEAR—COURSE B

Chemical, Mining, Metallurgy, Geology

SUBJECT	Lecture Hours Per Week		Laboratory Hours Per Week	
	First Term	Second Term	First Term	Second Term
Chemistry 210 (Qualitative Analysis).....	3	3	3	3
Chemistry 330 (Quantitative Analysis).....	2	2	*	*
Economics 305 (Economics for Engineers, II)	1	1	0	0
Engineering 310 (Applied Mechanics).....	2	2	0	2
Engineering 320 (Mechanical Drawing II)...	0	0	0	3
Engineering 330 (Surveying & Mapping II)	1	1	3	0
Engineering 350 (Descriptive Geometry)....	0	0	2	2
Engineering 360 (Materials of Engineering)	1	2	0	0
Geology 210 (General Geology).....	2	2	2	2
Geology 320 (Mineralogy).....	2	2	2	2
Mathematics 310 (Differential and Integral Calculus).....	3	3	0	0
Physics 306 (Elementary Electricity).....	3	0	3	0
	20	18	15	14

*The regular laboratory work in Chemistry 330 will be done by Engineering students in the four-week period following the spring examinations.

Details of Subjects

(The course numbering pattern is explained on p. 16)

ACCOUNTING

Associate Professor and

Chairman of the Department W. J. McDougall, B.A., C.A.

Sessional Lecturers Harry Wood, C.A.

A. A. Sterns, Lic.com., Dr. rer. pol.

Students who, after achieving the B.Com. degree, intend to proceed to professional accounting degrees—Chartered Accountant (C.A.), Certified Public Accountant (C.P.A.), Certified General Accountant (C.G.A.), or Registered Industrial and Cost Accountant (R.I.A.)—should consult the head of the Accounting Department before entering the final year of the Commerce course.

ACCOUNTING 210. [2]. *Elementary Accounting*

The theory and practice of accounts including the principles of debit and credit; books of original entry and special forms thereof; general ledger; subsidiary ledgers and controlling accounts; adjusting and closing entries; preparation of work sheet and financial statements; introduction to partnership and corporation accounting.

Day Division: Annually (lectures two hours a week; problem periods two hours a week).

Evening Division: Annually (lectures two hours a week).

ACCOUNTING 310. [3, 100]. *Intermediate Accounting*

The theory and practice of accounts with specific attention to the corporate form of business organization; problems of valuation and classification, principles of account analysis; assets, liabilities, capital stock, surplus and reserves; preparation of statements; comparative statements and ratio analysis.

PREREQUISITE: Accounting 210.

Day Division: Annually (lectures three hours a week).

Evening Division: Annually (lectures two hours a week).

ACCOUNTING 320. [4, 101]. *Advanced Accounting*

A course designed to provide for advanced study of the theory of accounts. Attention is also directed to the special accounting problems entailed in the treatment of instalment sales, mergers, consolidations, trusteeships and fund accounting. Emphasis in the latter part of the course is directed to budgetary controls and managerial accounting. Consideration is also given to the effects of taxation upon the accounts.

PREREQUISITE: Accounting 310.

Day Division: Not offered 1952-53.

Evening Division: 1952-53 (lectures two hours a week).

ACCOUNTING 340. [6]. *Cost Accounting and Auditing*

First term: Cost Accounting. The field of cost accounting and its definition; differentiation from general accounting; elements of costs; direct materials, direct labour and overhead; the distribution and application of the elements of cost; types of cost systems.

Second term: Auditing. An introduction to auditing; purposes, principles and methods of types of audit; outline of audit programme; analysis of accounts; auditing objectives and responsibilities; relation of general auditing to internal check and internal auditing; audit reports.

PREREQUISITE: Accounting 310.

Not offered 1952-53.

ACCOUNTING 345. [7]. *Cost Accounting*

First term: The field of cost accounting and its definition; differentiation from general accounting; elements of costs; direct materials, direct labour and overhead; the distribution and application of the elements of cost; types of cost systems.

Second term: Elaboration of components of cost; job cost system; process cost system; estimate cost procedure; budgeted cost, standard cost; distribution at normal and abnormal production level; various forms of cost ledgers.

PREREQUISITE: Accounting 310.

Evening Division: Annually (lectures two hours a week).

ACCOUNTING 380. [5, 102]. *Government Accounting and Finance*

A study of the financial administration and organization of the Dominion Government, including the preparation, legalization and execution of the budget; the authorization and collection of revenues; government borrowing and public debt; parliamentary appropriations; the disbursement of public monies; the audit of the public accounts; the financial functions of Parliament; the Committees of Supply and Ways and Means; the Governor in Council; the Treasury Board; the Receiver General and Minister of Finance; the Department of Finance and the Comptroller of the Treasury; the Bank of Canada; the Auditor General; and the Public Accounts Committee. The course will include some reference to the financial administrative practices of other countries.

PREREQUISITE: Accounting 210.

Not offered 1952-53 (but see Extension Course).

ANTHROPOLOGY

(See Sociology)

ASTRONOMY

Sessional Lecturer . . . P. M. Millman, A.M., Ph.D.

ASTRONOMY 210. [1]. *Descriptive Astronomy*

A general survey course dealing with the modern concepts of distance, the sizes and the physical nature of the heavenly bodies, including the sun, planets, satellites, comets, meteors, stars, and the diffuse matter of space. Opportunity will be given for astronomical observation at the Dominion Observatory.

TEXT: Baker, *Astronomy* (Van Nostrand, 5th edition).

PREREQUISITES: Mathematics 110, 111, 112, and Physics 110 (which may be taken concurrently).

Not offered 1952-53.

BIOLOGY

Associate Professor and Chairman of the Department

H. H. Nesbitt, M.A., Ph.D., D.Sc., F.R.E.S.

Assistant Professor of Botany W. I. Illman, B.A., M.Sc.

Lecturer E. A. O. Turnau, M.Sc.

Sessional Lecturer in Biochemistry R. M. Hochster, B.Sc., Ph.D.

As Carleton College is located within easy access of the Canadian national collections of botany, entomology and zoology it is advantageously placed for teaching the life sciences and particularly the taxonomic aspects of this field.

PASS COURSE

Students who are reading for a pass degree in Arts or Science and who wish to major in Biology are advised to take Botany 210 and Zoology 210 and 220 before attempting more advanced courses.

HONOURS COURSE

Candidates who intend to read for a degree with honours in the biological sciences should signify their intention of applying for admission to the honours course before they begin the third year. If at the time of entry to the College the candidate has such intentions, he should so plan his courses that he may be in a position at the end of his second year to proceed with one of the three

possible options outlined below. At the same time he should bear in mind that the Department of Biology requires that he take a minor of at least three courses in Chemistry (Chemistry 210, 310 and 320), or four in Physics, or four in Mathematics; a course in logic in his third year; an optional subject (English 350, Psychology 210, or History 220 or 322) in his fourth year; and that he have some knowledge of both French and German. (To this end the Department suggests that he make French his prescribed language other than English and that he take German 61 in his third year.)

Option I—Honours in Biology (Botany). The candidate will take Botany 210 in his second year, Botany 310 and Zoology 210 in his third year, and thereafter he is advised to take Botany 330, Biology 310, and Zoology 220 in his fourth year; and Biology 350, Biology 375, Botany 350, and any three of Botany 320 or 370, Biology 320 or 330, Mathematics 230, in his final year.

Option II—Honours in Biology (Zoology). The candidate will take Zoology 210 in his second year, Zoology 220 and Botany 210 in his third year, and thereafter he is advised to take Zoology 310, Zoology 360 or 380, and Biology 320 in his fourth year; and Biology 350, Biology 375, Zoology 350, and any three of Zoology 375, Zoology 330, Botany 310, Biology 320, Biology 330, or Mathematics 230 in his final year.

Option III—Honours in General Biology. The candidate will take either Botany 210 or Zoology 210 in his second year, followed by any two of Botany 210 or 310, Zoology 210 or 220 in his third year; in his fourth and final years, he will choose eight courses from the list supplied below in such a manner that Botany 310, Zoology 220, Biology 310 and 375 are included at some time in the course of his studies.

BIOLOGY 110. [1]. *General Biology*

A course designed to illustrate the fundamental principles governing life (both plant and animal), the development of organisms and the relationship of man to the world about him. This course is primarily intended for persons who do not intend to take another science subject.

REFERENCE TEXTS: Hegner, *General Zoology* (Macmillan).

Brown, *The Plant Kingdom*.

Transeau, Sampson and Tiffany, *Textbook of Botany*.

Day Division: Annually (lectures two hours a week, laboratory three hours a week).

Evening Division: Not offered 1952-53.

BIOLOGY 310. [5]. *Genetics and Cytogenetics*

A lecture and demonstration course designed to illustrate the principles of genetics and the physical bases of chromosomal inheritance.

TEXT: Sinnott, Dunn and Dobzhansky, *Principles of Genetics* (McGraw-Hill).

REFERENCE TEXTS: Riley, *Genetics and Cytogenetics* (Wiley).

Sharp, *Fundamentals of Cytology* (McGraw-Hill).

Darlington, *Recent Advances in Cytology* (Blakiston).

Goldschmidt, *Physiological Genetics* (McGraw-Hill).

Gates, *Human Genetics* (Macmillan).

Advances in Genetics (Academic Press).

PREREQUISITE: Biology 110.

Day Division: 1952-53 (lectures and seminar 2½ hours a week).

BIOLOGY 320.[16]. *Principles of Microscopic Investigation of Biological Materials*

The theory and practice of resolving microscopic structures of plant and animal material; of vital examination, of fixation and staining, and special methods of microscopy and photography.

REFERENCE TEXTS: Chamberlain, *Methods in Plant Histology* (University of Chicago Press).

Johansen, *Plant Microtechnique* (McGraw-Hill).

Lee, *Microtome's Vade-mecum* (Saunders).

Sass, *Elements of Botanical Microtechnique* (McGraw-Hill).

PREREQUISITES: Botany 210, Zoology 210 and 220. (Zoology 210 or 220 may be taken concurrently).

Day Division: 1952-53 (lectures one hour a week, laboratory eight hours a week).

BIOLOGY 330.[15]. *General Microbiology*

The general principles and practice of microbiology. Consideration will be given to the biologic, economic, ecologic and industrial importance and to the metabolic processes and the taxonomy of autotrophic, saprobic, and parasitic bacteria, yeasts, moulds and actinomycetes.

TEXT: To be announced.

PREREQUISITE: Botany 210 or Zoology 210 or Grade XIII Biology (or, with permission, Biology 110).

Not offered 1952-53.

BIOLOGY 350.[17a]. *Biochemistry*

Lectures on the dynamic chemistry of the living cell with certain physiological considerations. The study will include carbohydrates, proteins, fats and their metabolism; the chemistry and function of body tissues, vitamins, enzymes, hormones, antibiotics and problems of biological oxidation and energy transport.

TEXTS: West and Todd, *Textbook of Biochemistry* (Macmillan, 1951)

Mitchell, *Textbook of Biochemistry*, 2nd edition (McGraw Hill, 1950)

PREREQUISITES: Botany 210, Zoology 220, Chemistry 320 and 330. (Chemistry 330 may be taken concurrently).

Evening Division: 1952-53 (lectures 2½ hours a week).

BIOLOGY 375.[20]. *History of Biology*

A seminar course in the history of biology and biological theory.

REFERENCE TEXTS: Nordenskiöld, *The History of Biology* (Knopf).

Shull, *Evolution* (McGraw-Hill).

Woodger, *Biological Principles* (Keegan-Paul).

Bertalanffy and Woodger, *Modern Theories of Development* (Oxford).

Darwin, *Origin of Species*.

Sullivan, *The Limitations of Science* (New American Library).

PREREQUISITES: Biology 310, 350; Botany 210, 310; Zoology 210, 220; and Zoology 350 or Botany 350.

Day Division: 1952-53 (seminar 2½ hours a week).

Discontinued Course

BIOLOGY 11. *General Biology*

Last Offered

1948-49

Botany

BOTANY 210. [1, Biology 12]. *General Botany and Ecology*

Consideration of general principles of plant life will be followed by a study of plant form and function as related to the environment. Extensive readings in plant ecology and geography will be required.

TEXTS: Fritsh and Salisbury, *Plant Form and Function* (Bell).

Daubenmire, *Plants and Environment* (Wiley).

REFERENCE TEXTS: Braun-Blanquet, *Plant Sociology* (McGraw-Hill).

Cain, *Foundations of Plant Geography* (Harper).

Lyon & Buchman, *The Nature and Properties of Soil* (Macmillan).

Raunkiaer, *The Life Form of Plants and Plant Geography*.

Russell, *Soil Conditions and Plant Growth* (Longmans, Green).

Schimper, *Plant Geography*.

Trewartha, *An Introduction to Weather and Climate* (McGraw-Hill).

Day Division: 1952-53 (lectures two hours a week, laboratory four hours a week).

Evening Division: 1952-53 (lectures two hours a week, laboratory four hours a week).

BOTANY 310. [2]. *Comparative Morphology, Comparative Anatomy and Evolution of the Tracheophyta*

A course designed as a comprehensive, integral approach to a knowledge of the vascular plants, past and present.

REFERENCE TEXTS: Bower, *The Ferns* (Cambridge).

—, *Primitive Land Plants* (Cambridge).

Chamberlain, *Gymnosperms, Structure and Evolution* (U. of Chicago Press).

—, *Living Cycads* (U. of Chicago Press).

Seward, *Plant Life through the Ages* (Cambridge).

Eames and MacDaniels, *Introduction to Plant Anatomy* (McGraw-Hill).

PREREQUISITES: Botany 210 and Zoology 210 or 220. (Zoology 210 or 220 may be taken concurrently).

Day Division: 1952-53 (lectures two hours a week, laboratory four hours a week).

BOTANY 320. [6]. *Taxonomy and Geography of the Vascular Plants*

TEXT: To be announced.

PREREQUISITE: Botany 210.

Not offered 1952-53.

BOTANY 330. [3]. *Morphology, Reproduction and Evolution of the Algae and of the Bryophytes*

TEXT: To be announced.

PREREQUISITES: Botany 210 and Zoology 210 or 220. (Zoology 210 or 220 may be taken concurrently).

Not offered 1952-53.

BOTANY 350. [4b]. *Plant Physiology*

The fundamental principles of vegetable physiology; water relations, respiration, growth, morphogenesis and photosynthesis. (Half course) (To follow Biology 350).

TEXT: To be announced.

PREREQUISITE: Botany 210. (Biology 350 is to be taken concurrently).

Not offered 1952-53.

BOTANY 370. [5]. *Mycology*

A course devoted to the morphology, reproduction, taxonomy and evolution of the fungi.

TEXT: To be announced.

PREREQUISITE: Botany 210.

Not offered 1952-53.

Zoology

ZOOLOGY 210. [1, Biology 3]. *General Zoology, Pt. I*

A course devoted to a study of the comparative anatomy, taxonomy, development, evolution and ecology of invertebrate animals.

TEXT: Borradaile, Eastham, Potts and Saunders, *The Invertebrata* (Cambridge).
or Hegner, *Invertebrate Zoology* (Macmillan).

REFERENCE TEXTS: Brown, *Selected Invertebrate Types* (Wiley).

Hyman, *The Invertebrata*, Vols. I, II, III (McGraw-Hill).

Parker & Haswell, *Text-book of Zoology*, Vol. I (Macmillan).

Cambridge Natural History, appropriate volumes.

PREREQUISITE: Grade XIII Zoology useful but not necessary.

Day Division: 1952-53 and alternate years (lectures two hours a week, laboratory three to four hours a week).

ZOOLOGY 220. [2, Biology 2]. *General Zoology, Pt. II*

A course devoted to a study of the comparative anatomy, development and evolution of vertebrate (chordate) animals. Special attention is paid to the study of mammalian anatomy.

TEXT: Walter and Sayles, *Biology of the Vertebrates* (Macmillan).

REFERENCE TEXTS: Parker and Haswell, *Text-book of Zoology*, Vol. II (Macmillan).

deBeer, *Vertebrate Zoology* (Sidgwick and Jackson).

Hyman, *Comparative Vertebrate Anatomy* (Chicago).

Moog, *Structure and Development of the Vertebrates* (Prentice-Hall).

Craigie, *Bensley's Practical Anatomy of the Rabbit* (U. of Toronto Press).

PREREQUISITE: Grade XIII Zoology useful but not necessary.

Day Division: 1953-54 and alternate years (lectures two hours a week, laboratory four hours a week).

Evening Division: Not offered 1952-53.

ZOOLOGY 310. [3, Biology 6]. *Introduction to Arthropods*

A study of the comparative anatomy, taxonomy, development, evolution and economic importance of the animals included in the Phylum Arthropoda.

REFERENCE TEXTS: Borradaile, Eastham, Potts and Saunders, *The Invertebrata* (Cambridge).

Carter, *A General Zoology of the Invertebrates* (Sidgwick and Jackson).

Grassé, *Traité de Zoologie* (appropriate volumes) (Masson).
Parker and Haswell, *Textbook of Zoology*, Vol. I (Macmillan).

Savory, *The Arachnida* (Ed. Arnold).

Smith, Woods, et al., *Cambridge Natural History*, Vol. IV (Macmillan).

PREREQUISITES: Zoology 210 and 220.

Day Division: 1952-53 (lectures two hours a week, laboratory four hours a week).

ZOOLOGY 350. [4b, Biology 4]. *Animal Physiology*

A study of the fundamental principles of animal physiology. (Half course).

REFERENCE TEXTS: Zoethout and Tuttle, *Textbook of Physiology* (Mosbey).
Best and Taylor, *The Living Body* (Holt).
Sheer, *Comparative Physiology* (Wiley).

PREREQUISITES: Zoology 210 and 220. (Biology 350 shall be taken concurrently.)

Not offered 1952-53.

ZOOLOGY 360. [5, Biology 7]. *Entomology*

A course on the morphology and physiology of representatives of the more important orders and families of insects.

REFERENCE TEXTS: Snodgrass, *Principles of Insect-Morphology* (McGraw-Hill).
Wigglesworth, *Insect Physiology* (Methuen).

PREREQUISITES: Zoology 210, 220 and 310.

Day Division: 1952-53 (lectures two hours a week, laboratory four hours a week).

ZOOLOGY 375. [6]. *Insect Taxonomy and Ecology*

A course devoted to an intensive study of the classification of insects.

REFERENCE TEXTS: Comstock, *Introduction to Entomology* (Comstock).
Imms, *Entomology* (Methuen).
Grassé, *Traité de Zoologie* (Vol. IX, *Insects*) (Masson).
and others.

PREREQUISITES: Zoology 210, 220, 310 360. (Zoology 360 might be taken concurrently).

Not offered 1952-53.

ZOOLOGY 380. [7]. *Taxonomy and Ecology of the Vertebrates.*

A course devoted to a study of the taxonomy and geographic distribution of the major classes of vertebrates.

PREREQUISITES: Zoology 210 and 220.

Not offered 1952-53.

BOTANY

(See Biology)

ZOOLOGY 390. *Acarology*

A course devoted to an intensive study and classification of the Acari (mites).

PREREQUISITE: Permission of the Department.

Not offered 1952-53.

CHEMISTRY

Associate Professor and

Chairman of the Department J. M. Morton, M.Sc., M.A., Ph.D.

Assistant Professors J. M. Holmes, B.Sc., M.A., Ph.D.
P. M. Laughton, B.A., M.Sc., Ph.D.

Sessional Lecturer F. T. Rabbitts, B.Sc.

Demonstrator Gottfried Klee, M.S.

A student taking an honours course or a major in Chemistry would normally take at least Chemistry 110 and Chemistry 210 before entry to the third year. It is also recommended that Physics 210 be taken before entry to the fourth year and that Physics 305 be taken in the fourth year.

Beginning in the third year, Chemistry courses are taken in the following order: Chemistry 310, 320, 330 340, and two or more of Chemistry 350, 360, 370.

Each candidate for honours in Chemistry is required to solve a research problem and write a thesis. This is done in the final year and is listed below as Chemistry 390. Four typewritten copies of this thesis are to be deposited with the Chemistry Department not later than March 31st of the final year. One copy may be returned to the candidate.

CHEMISTRY 110.[1]. *General Chemistry*

An introductory course emphasizing the fundamental laws and principles of chemistry. The more important metals and non-metals and their compounds are studied with reference to their importance in Canadian industry.

TEXT: Briscoe, *College Chemistry* (Houghton Mifflin, 4th edition, 1949).

Day Division: Annually (lectures three hours a week, laboratory three hours a week).

CHEMISTRY 210.[6]. *Qualitative Analysis*

Atomic structure, electronic theory of valence, oxidation and reduction, chemical equilibrium, theory of ionization, solubility product, ionization constants, complex ions and compounds, colloids. The application of the principles of chemical equilibrium to the systematic separation of the common cations and anions is practised in the laboratory. Some elementary quantitative determinations will be done. (This course is recommended for second-year students).

TEXTS: Curtman, *Introduction to Semi-Micro Qualitative Analysis* (Macmillan, 1950).

Belcher and Williams, *A Course in Qualitative Analysis* (Houghton Mifflin).

PREREQUISITES: Chemistry 110 and Mathematics 110 and 112.

Day Division: Annually (lectures three hours a week, laboratory three hours a week).

Evening Division: 1952-53 and alternate years (lectures two hours a week, laboratory two to three hours a week).

CHEMISTRY 215.[3]. *Elementary Physical Chemistry*

An introductory course in physical chemistry for students in first year Engineering. The course covers the kinetic theory, properties of solutions, electrolytic dissociation, thermochemistry, chemical equilibrium, the periodic system, atomic structure, hydrogen ion concentration, dispersed systems, and other topics. Problems to illustrate the application of the laws of chemistry will be assigned.

TEXT: Hildebrand, *Principles of Chemistry* (Macmillan, 5th edition, 1947).

PREREQUISITE: Chemistry 110.

Day Division: Annually, for first year Engineering students only (lectures three hours a week).

CHEMISTRY 310. [8] *Physical Chemistry*

An introduction to the principles of physical chemistry, including such topics as: kinetic theory of gases, liquids and solids, thermodynamics and thermochemistry, properties of solutions from kinetic theory and thermodynamic point of view, equilibrium in homogeneous and heterogeneous systems with applications of thermodynamics, electrochemistry and surface phenomena. Laboratory work and solutions of problems on each section form an important part of this course.

TEXTS: Daniels, *Outline of Physical Chemistry* (Wiley, 1948 edition).

Daniels, Matthews and Williams, *Experimental Physical Chemistry* (McGraw-Hill, 4th edition, 1949).

PREREQUISITES: Chemistry 210 and Mathematics 210.

Day Division: Annually (lectures three hours a week, problems one hour a week, laboratory three hours a week).

CHEMISTRY 315. [5]. *Chemistry of Engineering Materials*

A course for second year Engineering students. It deals with the materials of engineering, water treatment, corrosion, organic compounds, fuel, rubber, plastics and explosives.

REFERENCE TEXT: Leighou, *Chemistry of Engineering Materials*.

PREREQUISITE: Chemistry 215.

Day Division: Annually, for second year Engineering students only (lectures two hours a week).

CHEMISTRY 320. [2]. *Organic Chemistry*

An introductory course in organic chemistry, consisting of a survey of the chemistry of aliphatic and simple aromatic compounds. Emphasis is placed on the more general theoretical principles concerning structure and reactivity. The laboratory work provides practice in preparations, reactions, and detection of the more common functional groups.

TEXTS: Conant and Blatt, *The Chemistry of Organic Compounds* (Macmillan, 1947).

or Fieser and Fieser, *Organic Chemistry* (D. C. Heath, 1950), which is recommended for students majoring in Chemistry.

Coleman, Wauzonek and Buckles, *Laboratory Manual of Organic Chemistry* (Prentice Hall, 1949).

PREREQUISITE: Chemistry 112. (It is recommended that Chemistry 210 be taken previously or concurrently).

Day Division: Annually (lectures three hours a week, laboratory three hours a week).

Evening Division: 1952-53 (lectures three hours a week, laboratory three hours a week).

CHEMISTRY 330. [7]. *Quantitative Analysis*

A course in quantitative analysis covering the fundamental methods of volumetric and gravimetric analysis.

TEXT: Hamilton and Simpson, *Talbot's Quantitative Analysis* (Macmillan, 9th edition 1948).

PREREQUISITE: Chemistry 210.

Day Division: Annually (lectures two hours a week, laboratory six hours a week). (Note: Engineering students are given lectures two hours a week during the regular academic session and take all the laboratory work during the four-week period immediately following the spring examinations.)

Evening Division: Not offered 1952-53.

CHEMISTRY 340.[4]. *Intermediate Organic Chemistry*

The lecture work consists of a survey of alicyclic, polynuclear aromatic and heterocyclic chemistry, with emphasis on methods of structure proof and synthesis, and the application of the electronic theory to problems of structure and reactivity. The laboratory work on preparative techniques, and qualitative identification of organic compounds singly and in mixtures, is accompanied by paper problems of the same kind.

TEXTS: Fieser and Fieser, *Organic Chemistry* (D. C. Heath, 1950).

Shriner and Fuson, *Identification of Organic Compounds* (Wiley, 1946).

PREREQUISITE: Chemistry 320.

Day Division: Annually (lectures three hours a week, laboratory three hours a week).

Evening Division: Not offered 1952-53.

CHEMISTRY 350.[10]. *Advanced Physical Chemistry*

Selected topics in physical chemistry, including kinetics of chemical reactions, phase rule and phase equilibria, further discussions of electrochemistry and surface chemistry, elementary quantum theory and thermodynamics. Laboratory work will include selected more advanced experiments with emphasis on glass blowing and high vacuum techniques.

REFERENCE TEXT: Glasstone, *Textbook of Physical Chemistry* (Van Nostrand, 1948) and such texts in kinetics, phase rule, electrochemistry and thermodynamics as may be assigned from time to time.

PREREQUISITE: Chemistry 310.

Day Division: Annually (lectures three hours a week, problems one hour a week, laboratory three hours a week).

CHEMISTRY 360.[11]. *Advanced Inorganic Chemistry*

The structure of the atom, the electronic theory of valence, structures of complex inorganic compounds, metal amines, the properties of the elements in relation to their positions in the periodic table, radioactivity, isotopes, radiochemistry and the use of isotopic tracers. The laboratory work includes the preparation of a number of complex inorganic compounds, colloidal dispersions and the carrying out of some unusual reactions.

TEXT: Glasstone, *Sourcebook on Atomic Energy*.

PREREQUISITE: Chemistry 310.

Day Division: 1952-53 (lectures three hours a week, laboratory three hours a week).

CHEMISTRY 370.[12]. *Advanced Organic Chemistry*

Selected topics such as electronic theories of structure, the mechanisms of organic reactions, stereochemistry, and the chemistry of more complex naturally occurring substances. Students will be required to demonstrate a capacity for interpreting and criticizing the original literature.

TEXT: To be announced.

PREREQUISITE: Chemistry 340.

Day Division: 1952-53 (lectures three hours a week, laboratory three hours a week).

CHEMISTRY 390.[13]. *Research Project and Seminar*

Senior students in honours chemistry will do a research project under the direction of one of the members of the Department.

A seminar will be conducted at which advanced students will present reports on recent progress in selected fields of chemistry, and from time to time experts in certain fields from outside the College will be invited to speak. The attendance at such a seminar or similar

meetings at the National Research Council is intended to bring the student into close contact with specific problems in current research.

Day Division: Annually (laboratory hours arranged, seminar periods usually two hours a fortnight).

Renumbered Course

CHEMISTRY 9. *Biochemistry*

New number

BIOLOGY 350

CLASSICS

Assistant Professor and

Chairman of the Department . . . D. M. Shepherd, M.A.

Sessional Lecturers in Latin . . . W. H. Showman, M.A.

Agnes C. Sweeney, B.A.

Greek

GREEK 51.[A]. *Elementary Greek*

A preparatory course for students who have not previously studied Greek. (Credit is given for the course only upon subsequent completion of Greek 110. If taken to make up a matriculation deficiency, no credit is allowed.)

TEXTS: To be announced.

Day Division: Annually (lectures four hours a week).

GREEK 110.[1]. *First Year Greek*

Selected readings from Greek authors; review of the elements of Greek grammar; prose composition.

TEXTS: To be announced.

PREREQUISITE: Greek 51 or equivalent.

Day Division: Annually (lectures three hours a week).

GREEK 210.[2]. *Second Year Greek*

Translation and interpretation of prescribed texts; prose composition; sight translation.

TEXTS: To be announced.

PREREQUISITE: Greek 110.

Day Division: 1952-53 (lectures three hours a week).

Latin

LATIN 51.[A]. *Elementary Latin*

A preparatory course for students who have not taken Latin for junior matriculation. (Credit is given for this course only upon the subsequent completion of Latin 110. If taken to make up a matriculation deficiency no credit is allowed.)

TEXTS: To be announced.

Evening Division: Annually (lectures three hours a week).

LATIN 110.[1]. *First Year Latin*

Translation and interpretation of prescribed texts; sight translation; prose composition.

TEXTS: Breslove, *Latin Composition* (Gage).

Latin Prose Selections (Nelson).

Latin Poetry Selections (Nelson).

PREREQUISITE: Latin 51 or its equivalent.

Evening Division: Annually (lectures three hours a week).

LATIN 210. [2]. *Second Year Latin*

Translation and interpretation of prescribed texts; sight translation; prose composition.

TEXTS: To be announced.

PREREQUISITE: LATIN 110.

Day Division: 1952-53 (lectures three hours a week).

Evening Division: Not offered 1952-53.

LATIN 310. [3]. *Literature of the Republic*

Lyric poetry of Catullus; letters of Cicero; Roman comedy; selected readings in the history of the literature of the republic.

TEXTS: To be announced.

PREREQUISITE: Latin 210.

Not offered 1952-53.

LATIN 320. [4]. *Literature of the Empire*

Satires of Horace and Juvenal; history of Tacitus; selected readings in other authors and the history of the literature of the empire.

TEXTS: To be announced.

PREREQUISITE: LATIN 210.

Not offered 1952-53.

*Classical Civilization*CLASSICAL CIVILIZATION 275. [1]. *Mediterranean Civilization in the Ancient World*

A survey of the Mediterranean world in Greco-Roman times—political, economic, social and cultural history. (No knowledge of Greek or Latin is required.) (This course is listed also as History 275).

TEXTS: To be announced.

Day Division: Annually (lectures three hours a week).

COMMERCE

(This listing discontinued after 1951-52)

*Renumbered Courses**New number*

COMMERCE 1. *Commercial Law* COMMERCIAL LAW 210

COMMERCE 2. *Business Finance* ECONOMICS 330

COMMERCE 4. *Labour Economics and Industrial Relations* ECONOMICS 335

*Discontinued Courses**Last offered*

COMMERCE 3b. *Business Policies* 1950-51

COMMERCE 5. *Marketing* 1951-52

COMMERCE 6. *Business Problems* 1948-49

COMMERCIAL LAW

Sessional Lecturer M. E. Corlett, B.A.

COMMERCIAL LAW 210. [COMMERCE 1]. *Commercial Law*

The law of contract and agency, sale of goods, negotiable instruments, partnerships and companies, bankruptcy and insolvency, bills of sale and chattel mortgages.

Day Division: Annually (lectures three hours a week).

Evening Division: Annually (lectures three hours a week).

ECONOMICS

Assistant Professor and

Chairman of the Department H. S. Gordon, A.M.

Lecturer H. E. English, B.A.

Sessional Lecturers W. E. Duffett, B.Com., M.Sc. (Econ.)

G. S. Watts, M.A.

E. C. J. Westbrook, M.A.

HONOURS COURSE

A candidate for honours in Economics will be required to spend five years from junior matriculation and should signify his intention of applying for honours before commencing his third year. He should take Economics 210 during the second year.

The honours requirements consist of extensive work in Economics with a minor in allied social sciences. The student's programme for the third and subsequent years will be planned in consultation with the Department of Economics.

ECONOMICS 210. [2]. *Principles of Economics.*

The course contains four sections: First, the basic ingredients of the economy—resources and wants; second, the organization of the economy for the satisfaction of wants (the part played by business, labour and government); third, the processes of allocation and income determination, and the associated problems of monopoly, unemployment and inflation; and finally, international economics and its relationship to a peaceful world.

Day Division: Annually (lectures two hours a week, group discussion one hour a week).

Evening Division: Annually (lectures two hours a week). Also Summer 1952 (lectures five hours a week).

ECONOMICS 290. *Economics for Engineers, I*

This course, followed by Economics 305, is designed to give Engineering students an introduction to some of the economic problems existing in the world of today, with particular reference to Canada.

Day Division: Annually, for first-year Engineering students only (lectures one hour a week, *first term*).

ECONOMICS 305. [4]. *Economics for Engineers, II*

A continuation of Economics 290.

Day Division: Annually, for second-year Engineering students only (lectures one hour a week, *both terms*).

ECONOMICS 310. [8, 103]. *Money and Banking*

The theory and practice of banking and finance, with specific reference to the purposes and functions of the country's important financial institutions. Attention will be paid to the role of money and finance in the production and distribution of the national income and in the problems of inflation and unemployment. Relevant problems of international trade and foreign exchange will also be introduced.

PREREQUISITE: Economics 210.

Day Division: Annually (lectures two hours a week).

Evening Division: 1953-54 and alternate years (lectures two hours a week).

ECONOMICS 315.[10, 105]. *Economic History*

This course is concerned with tracing economic development from feudalism to finance capitalism, particularly in the United Kingdom and Western Europe.

PREREQUISITE: Economics 210.

Not offered 1952-53.

ECONOMICS 320.[16]. *Statistical Methods in the Social Sciences*

An introductory course dealing with the use of statistical methods in economics and the other social sciences. The principal statistical measurements will be studied. The use of statistical analysis as a method for the precise and reliable acquisition of knowledge will be stressed. The misuse of statistical information will be examined. A critical approach to statistical methods will be maintained throughout the course. (This course will yield a half credit only, if Mathematics 230 has been taken for credit.)

PREREQUISITE: Mathematics 110, 111 and 112, and Economics 210, or the permission of the instructor.

Day Division: Annually (lectures two hours a week; problem work).

Evening Division: Not offered 1952-53.

ECONOMICS 330.[Commerce 2]. *Business Finance*

A study of the capital of business; methods and costs of raising capital; shares and bonds; the capital market; operating problems, dividends, reserves, combinations, bankruptcy.

PREREQUISITE: Economics 210.

Day Division: Not offered 1952-53.

Evening Division: 1952-53 (lectures two hours a week).

ECONOMICS 335.[Commerce 4]. *Labour Economics and Industrial Relations*

An examination of the position of the labourer in the Canadian economy and of the economic and sociological theory related to this study. The place and function of the Government in the relationship between management and labour. Trade unions—their aims and history. Collective bargaining—its purpose and meaning to industry and to labour.

PREREQUISITE: Economics 210.

Day Division: Not offered 1952-53.

Evening Division: 1952-53 (lectures two hours a week).

ECONOMICS 340.[7, 102]. *International Trade*

It is the aim of this course to provide the student with a wide working basis. The first half of the course deals with the mechanics of international trade, the foreign exchange market, bills of exchange, the balance of payments, tariffs, foreign exchange control, etc. Attention is then turned to the theory of international trade, from the more primitive concepts down to the recent analytical structures. Throughout the balance of the course some attention will be given to special studies of topical interest. But the primary aim is to put to practical use the knowledge of the mechanics and theoretical tools of international trade gained earlier in the course, through an interpretation of several phases of Canadian economic history relating to the international field.

PREREQUISITE: Economics 210.

Evening Division: 1952-53 (lectures two hours a week).

ECONOMICS 345.[11, 106]. *Public Finance and Fiscal Policy*

The course deals with fiscal policy in modern economic society. It covers the role of government expenditures and taxation, and also the relation of fiscal policy to employment, prices, etc. The first part of the course examines, in general terms, the changing economic role of the state, the nature and extent of public expenditure, and the ways in which the

expenditure can be financed. The traditional principles of taxation are thoroughly examined. The latter part of the course covers the development of Canadian fiscal policy from Confederation to the present day in the light of changing national economic conditions. A final survey covers the characteristics and problems of public finance in Canada at present and the outlook for the immediate future. An attempt is made to evaluate these characteristics and problems in the light of the principles studied in the first part of the course.

PREREQUISITE: Economics 210.

Evening Division: 1953-54 and alternate years (lectures two hours a week).

ECONOMICS 350. [12, 107]. *Economic Policy*

A review will be given of the development of economic policy on all government levels during recent decades. With this review as a background, a more exhaustive analysis will be made of the extent to which the Dominion Government has become involved in formulating and implementing policy in selected fields such as industrial development, agriculture, transportation, monopolies, unemployment; trade unions, etc. The principal concern of the course will be to work toward an understanding of the reasoning behind governmental policies—those which are proposed as well as those which have already been implemented. (The course will be conducted as a seminar, and participation by visiting lecturers from the government service is anticipated.)

PREREQUISITE: Economics 210.

Day Division: Not offered 1952-53.

Evening Division: 1952-53 (lectures two hours a week).

ECONOMICS 360. [3]. *The Economic Development of Canada*

(Offered in the Department of History as History 360).

ECONOMICS 365. [9]. *Modern Economic Theory*

The first part of the course deals with the individual organisms within the economy—the firm, the industry, and the household. Questions of demand, price, output, monopoly and competition are treated. The second part deals with the theory of the economy as a whole. Questions of national income and its composition, business cycles, and economic development are discussed.

PREREQUISITE: Economics 210 and one other course in Economics.

Day Division: Not offered 1952-53.

Evening Division: 1952-53 (lectures two hours a week).

ECONOMICS 370. [15]. *History of Economic Thought*

The course will study the contributions of the principal figures in the development of economics. It will endeavour to examine their ideas in a background of the economic problems of their times and the developments which were taking place concurrently in the other fields of human inquiry. An effort will be made to indicate the extent to which economic ideas influenced and were influenced by historical events.

PREREQUISITE: Economics 210.

Day Division: 1953-54 and alternate years (lectures two hours a week).

ECONOMICS 375. [14]. *Modern Economies*

The first half of this course is concerned with the development of the economic institutions of Canada and the United States, beginning with their European antecedents. The significance of industrial concentration will receive considerable treatment. The second half includes a study of the economic organization of Nazi Germany, the Soviet Union, the United Kingdom and other economies.

PREREQUISITE: Economics 210.

Day Division: 1952-53 (lectures two hours a week).

ECONOMICS 390. [100]. *Tutorial in Economics*

During the term the student will write a series of papers which will be the subjects of discussions between him and his tutor. The topics of the papers will be selected in the light of the student's knowledge, interests and objectives; tutors will be assigned on the same bases.

PREREQUISITE: Permission of the Department.

Day Division: Annually (tutorial hours arranged).

Evening Division: Annually (tutorial hours arranged).

ECONOMICS 391. [101]. *Tutorial in Economics*

An additional tutorial in economics may be taken subsequent to or concurrently with Economics 390. Methods of study will be designed to accord with the student's individual needs.

PREREQUISITE: Permission of the Department.

Day Division: Annually (tutorial hours arranged).

Evening Division: Annually (tutorial hours arranged).

*Discontinued Courses**Last offered*

ECONOMICS 5. [100]. <i>Natural Resources of Canada</i>	1949-50
ECONOMICS 6. [101]. <i>Agricultural Economics and Policy</i>	1950-51
ECONOMICS 13. <i>Comparative Economic Institutions</i>	1949-50

ENGINEERING

Assistant Professor and

Chairman of the Department . . . E. W. Stedman, C.B., O.B.E.

Sessional Lecturers R. B. Gamble, B.Sc.

S. G. Tackaberry, C.B.E., B.A.Sc.

R. C. McDonald, B.A.Sc.

All courses in this group are offered annually in the day division, except where otherwise noted. The day courses may be taken only by candidates for the Certificate in Engineering.

ENGINEERING 210. [1]. *Mechanics*

Statics. Fundamental principles of the laws of equilibrium of forces; application to the determination of stresses in simple structures.

Dynamics. General equations of motion; work, energy and momentum, angular momentum, simple harmonic motion.

TEXT: Singer, *Applied Mechanics*.

Lectures two hours a week *both* terms. Laboratory two hours a week, *both* terms.

ENGINEERING 220. [12]. *Mechanical Drawing I*

Fundamental drawing techniques and their application to the solution of engineering problems, lettering, the use of instruments and materials, freehand orthographic projection and pictorial sketching, auxiliary views, sections, pictorial drawings, fasteners, dimensioning, working drawings, assembly drawings, tracing, checking, blueprinting and shop terms. Also work in projection involving true lengths and shapes, developed surfaces and intersections.

TEXTS: French, *Engineering Drawing*, 7th edition.

Svensen, Schuman and Street, *Drafting Problem Layouts*, Series B.

Laboratory six hours a week, *both* terms.

ENGINEERING 230. [10]. *Surveying I*

General principles and practice of surveying with the chain, transit and level. Field work. (Half course).

TEXT: *Elementary Surveying* (University of Toronto Press).

Day Division: Annually (lectures one hour a week, *both* terms, laboratory three hours a week, *second* term, approximately six to eight hours will be devoted to instrument and field work in the first term).

Evening Division: 1952-53 (lectures one hour a week, laboratory 1½ hours a week, *both* terms; approximately six to eight hours will be devoted to instrument and field work in the first term).

ENGINEERING 235. [9]. *Surveying Field Work*

An obligatory summer school in surveying for all first year Engineering students is held under arrangement with McGill University for a period of four weeks in the spring following the first year's work at Carleton College.

ENGINEERING 240. [7]. *Engineering Problems I*

Working out problems under supervision. The problems are based on the current work in classes, with additional general engineering problems. Use of the slide-rule. Elements of nomography.

Problem periods, three hours a week, *both* terms.

ENGINEERING 295. [14]. *Engineering and Society*

A series of lectures intended to show the relation between the work of engineers and society.

TEXT: Young, Innis and Dale, *Engineering and Society* (University of Toronto Press).

Lectures one hour a week, *second* term. (Not offered 1952-53. See Economics 290).

ENGINEERING 310. [2]. *Applied Mechanics*

Statics. Coplanar, concurrent, parallel and non-concurrent force systems. Graphically and mathematically. Flexible cables; friction, centroid, centres of gravity, moment of inertia.

Dynamics. Kinematics of a particle; kinematics of a rigid body; curvilinear motion; rotation; work energy and power; impulse and momentum.

Hydraulics. Fluid properties; hydrostatics, including pressure, gauges, centre of pressure, pressure on curved surfaces, stability of a gravity dam. Stability of flotation, including condition for stability, metacentric height, period of roll. General principles of fluid motion, including basic principles, equation of continuity, Bernoulli's equation.

TEXTS: Girvin, *Applied Mechanics*.

Ellis, *Elements of Hydraulic Engineering*.

PREREQUISITE: Engineering 210.

Lectures two hours a week, *both* terms. Laboratory two hours a week, Course A *both* terms, Course B *second* term only.

ENGINEERING 320. [13]. *Mechanical Drawing II*

Continuation of the work of Engineering 220 (Mechanical Drawing I). Conventions, sections, extensive study of dimensioning practice, explanation of shop terms, detail and assembly drawings, sketching, piping layouts, use of welding symbols, elements of architectural and structural drawing, pictorial illustrations, use of references.

TEXT: French, *Engineering Drawing*, 7th edition.

Laboratory three hours a week: Course A, *both* terms; Course B, *second* term only.

ENGINEERING 330.[11]. *Surveying and Mapping II*

Continuation of the work of Engineering 230 (Surveying I), including mapping. (Half course.)

TEXT: Breed, *Surveying*.

Day Division: Annually (lectures one hour a week, *both* terms; laboratory three hours a week, *first* term).

Evening Division: 1953-54 (lectures one hour a week, laboratory 1½ hours a week, *both* terms).

ENGINEERING 340 [8]. *Engineering Problems II*

Working out problems under supervision. The problems are based on the current work in the classes.

Problem periods, one hour a week *first* term, two hours a week *second* term.

ENGINEERING 350.[3]. *Descriptive Geometry*

A continuation of the work taken in Engineering 12 (Mechanical Drawing I), including solution of problems involving point, line and plane, revolution, intersection of surfaces, perspective drawing; mining problems.

TEXT: Wellman, *Technical Descriptive Geometry*.

PREREQUISITE: Engineering 220.

Lectures and laboratory two hours a week, *both* terms.

ENGINEERING 360.[4]. *Materials of Engineering*

A. Manufacture of iron and steel, non-ferrous metals and alloys; wood, stone and brick, concrete, plastics, rubber.

TEXT: Moore, *Materials of Construction*.

B. Strength of materials: stress, strain, modulus of elasticity, Poisson's ratio, statically indeterminate loads, factors of safety, thermal stresses, thin-walled cylinders, riveted joints, welded joints, torsion in shafting, flexure formula, bending moment and shearing force diagrams, shear stress in beams, deflection of beams, moment-area method for slopes and deflection, principle of superposition, columns and struts, creep and fatigue.

TEXT: Seely, *Resistance of Materials*.

Lectures one hour a week *first* term, two hours a week *second* term.
(Laboratory work included in Engineering 310).

ENGINEERING 370.[5]. *Mechanics of Machines*

Displacement, velocity, acceleration, instant centres, velocity and acceleration in plane motion, slide crank, cams, rolling contact, tooth gearing; involute teeth, gear trains, belt length, general principles for belts, special mechanisms, crank effort.

TEXTS: Guillet, *Kinematics of Machine*.

Headley, *Work Book in Kinematics*.

Lectures two hours a week, laboratory two hours a week, *first* term.

ENGINEERING 380.[6]. *Heat Engines, Elementary*

Definitions, first and second laws of thermodynamics, gas laws, absorption of heat, relation of specific heats, expansions in general, isothermal, adiabatic, work of expansion, Carnot cycle, reversibility, properties of steam, use of steam tables, steam calorimeters, thermal cycles (description only), compressor cycles.

TEXT: Allen and Bursley, *Heat Engines*.

Lectures, one hour a week, *second* term.

ENGINEERING 390.[15]. *Public Speaking for Engineers*

Each engineering student is given the opportunity to address the class and visitors, on an engineering subject, during the second year.

Practice, one hour a week, *second* term.

ENGLISH LANGUAGE AND LITERATURE

Assistant Professor and

Chairman of the Department . . . A. M. Beattie, A.M.

Assistant Professor . . . G. B. Johnston, M.A.

Lecturers . . . M. M. MacOdrum, M.A., Ph.D.
G. J. Wood, M.A.

Sessional Lecturers . . . Dorothy Chamberlin, M.A.
A. E. Malloch, M.A.

Assistants . . . Mary A. Phillips, M.A.
Audrey E. Strutt, B.A.

English Composition: A course in English composition (English 110) must be taken by all first-year students in English and may be required of a student in any year who shows inability to write correct English.

English as a Major Subject: Every student who elects English as his major subject will plan his programme in conference with a representative of the department. During the three years of study he will complete the following courses in this sequence, as far as possible:

First year, English 220

Second year, English 320, 326, 330

Third year, English 340, 350, 355

Adjustments may be made in special cases but always with consideration of certain indispensable objectives for students majoring in English:

1. to become acquainted with the chief works of major authors from the fourteenth to the twentieth century
2. to understand the principal developments in language, theme, and genre
3. to acquire standards of literary judgment, appreciation, and expression.

In very special circumstances, a student may fulfil these requirements in part by individual reading, assigned, supervised, and tested by the Department of English.

English for Honours Students: Each candidate for a degree with honours in English Language and Literature will plan his programme and pursue his course of studies under the supervision of a departmental adviser. English 370 is preliminary to all honours courses in English.

General recommendations: A student of English is expected to own and use a good dictionary. These are recommended:

The Concise Oxford Dictionary (Oxford)

Webster's Collegiate Dictionary (Thomas Allen)

The American College Dictionary (Harper)

Also, every student of English should have available for frequent reference a handbook. Recommended:

Perrin, *Writer's Guide and Index to English* (Gage)

Fowler, *Modern English Usage* (Oxford)

ENGLISH 110. [10]. *English Composition*

A review and practice course in grammar and composition for first-year students. Other students, of any year, who show deficiencies in expression may be required to take all or prescribed parts of English 110. The course is conducted by means of a weekly class, regular writing assignments, frequent tests, and individual conferences with the instructor. (This course carries a credit only as part of English 120. If it is taken as a single subject, the tuition fee is that of a half-course).

TEXTS: To be announced.

Day Division: Annually (class one hour a week, practice period one hour a week).

Evening Division: Annually (class and practice period two hours a week).
Also Summer 1952 (class and practice period two hours every fortnight).

ENGLISH 120. [1]. *Introduction to College Literature*

Study of selected plays, poems, essays, a novel, and short stories. The purpose of the course is to acquaint the student with basic principles of literary appreciation and with the chief forms and modes of literary expression. (English 110 is required of all students of English 120.)

TEXTS:

Brooks and Warren, *Understanding Poetry*; Sophocles, *The Theban Plays* (Penguin); Shakespeare, *Hamlet*; Morrell (ed.), *Four English Comedies* (Penguin); Williams, *A Book of English Essays*; Hardy, *The Mayor of Casterbridge*; Short and Sewall, *Short Stories for Study*.

Day Division: Annually (lectures three-hours a week).

Evening Division: Annually (lectures two hours a week).

ENGLISH 210. [2]. *English Authors from Chaucer to T. S. Eliot*

A study of selected masterpieces in English literature from the fourteenth to the twentieth century—a course for students who do not elect English as a major subject. Essay-writing and regular participation in discussion groups are required.

TEXTS:

Summer 1952—Snyder and Martin, *A Book of English Literature* (two volumes) or *The College Survey* (1945, one-volume edition).
Winter 1952-53—Chaucer, *The Canterbury Tales*—selected (Crofts); Shakespeare, *King Lear*; Jonson, *Volpone* (in *Four English Comedies*—Penguin); Milton, *Paradise Lost* (Rinehart); Swift, *Gulliver's Travels*; Pope, *Selected Poems* (Penguin); Johnson, *Rasselas, Lives of the Poets*—selected; Boswell, *The Life of Samuel Johnson* (Nelson, *A Shorter Boswell*); Wordsworth, *The Prelude*; poems by Coleridge, Keats, Shelley, Tennyson (an anthology, to be selected); Dickens, *David Copperfield*; Shaw, *The Doctor's Dilemma*; T. S. Eliot, *Selected Poems* (Penguin).

PREREQUISITE: English 120 or equivalent.

Day Division: 1952-53 (lectures two hours a week, group discussion one hour a week).

Evening Division: 1952-53 (lectures two hours a week, group discussion one hour a week). Also Summer 1952 (lectures five hours a week).

ENGLISH 220. *Renaissance Prose and Poetry*

Primarily intended as an introductory course for students majoring in English. The period covered is considered to be an essential point of reference for subsequent study of other literary periods; normally, therefore, it is to be taken in second year.

TEXTS:

More, *Utopia*; Elyot, *The Governor*; Ascham, *The Schoolmaster*; Sidney, *Defence of Poesy*; Hooker, *The Laws of Ecclesiastical Polity, Book I*; Bacon, *Essays, The Advancement of Learning*; Donne, *Sermons*—selected; Browne, *Religio Medici*; Walton, *Lives*—selected; Bunyan, *Pilgrim's Progress*; poems by Wyatt, Surrey, Sidney, Spenser, Shakespeare, Jonson, Donne, Herbert, Vaughan, Traherne, Crashaw, Marvell, Herrick, Lovelace, Suckling, in *Masterpieces of English Poetry*, vol. III.

Additional reading of selections from works which had a significant effect upon the Renaissance mind will be prescribed.

PREREQUISITES: English 110 and 120 or equivalents.

Day Division: 1952-53 (lectures two hours a week).

Evening Division: 1952-53 (lectures two hours a week).

ENGLISH 230. [12]. *English for Engineering Students*

A course in literature and composition for first-year Engineering students.

TEXTS: Kierzek, *The Practice of Composition*

Dean, *The College Omnibus*, 7th edition

Day Division: Annually (lectures two hours a week).

ENGLISH 305. [S1]. *Classics of the Western Tradition*

Reading, in English translations, of *The Odyssey*; passages from *The Iliad*; passages from *The Aeneid*; passages from the *Old Testament*; Dantes "Inferno"; selected essays by Montaigne. Instructors in other departments join the English department in supervising this seminar. (Half course.)

PREREQUISITE: For honours students; others by permission of the instructors.

Day Division: 1952-53 (seminar one hour a week, *both* terms).

ENGLISH 310. [8b]. *Old English*

A brief but intensive study of Anglo-Saxon phonology, inflections, and grammar. Selected readings. (Half course.)

PREREQUISITE: For honours students.

Day Division: 1952-53 (classes two hours a week, *second* term).

ENGLISH 315. [9]. *Introduction to Mediaeval Literature*

A survey of literary types, authors, and chief works between the Norman Conquest and the fifteenth century, with particular attention to the following: *The Owl and the Nightingale*; *Piers Plowman*; *Sir Gawain and the Green Knight*; *Morte d'Arthur*. Additional selections from Cook, *A Literary Middle English Reader*.

PREREQUISITE: For honours students.

Not offered 1952-53.

ENGLISH 317. [S2]. *The Life and Works of Chaucer*

In the first term, *The Canterbury Tales*; in the second term, *The Book of the Duchess*, *The House of Fame*, *Troilus and Criseyde*. (Half course.)

TEXT: F. N. Robinson (ed.), *Chaucer's Complete Works*.

PREREQUISITE: For honours students; others by permission of the instructor.

Day Division: 1952-53 (seminar two hours a week, *both* terms).

ENGLISH 320. [4]. *Chaucer, Spenser, and Milton*

TEXTS: F. N. Robinson (ed.), *Chaucer's Complete Works*

Spenser, *The Faerie Queene*

Milton, shorter poems, *Paradise Lost*, *Samson Agonistes*, selected prose.

PREREQUISITE: English 220.

Not offered 1952-53.

ENGLISH 322. [S5]. *Spenser and Milton*

Study of the two great English poets of the Renaissance. Special consideration of *The Faerie Queene* and *Paradise Lost*. (Half course.)

TEXTS: Spenser, *Poetical Works* (Oxford)

Patterson (ed.), *The Student's Milton*

PREREQUISITE: For honours students; others by permission of the instructor.

Day Division: 1952-53 (seminar two hours a week, *second* term).

ENGLISH 324. [S6]. *Drama in England until 1642*

Study of the development of dramatic production and literature from the middle ages to the closing of the theatres in 1642. Reading of representative plays. (Half course.)

Not offered 1952-53.

ENGLISH 326.[6]. *Life and Works of Shakespeare*

A study of the mediaeval origins of English drama, its development to and through the sixteenth and early seventeenth centuries, a survey of theatrical conditions of the Elizabethan period; lectures on the chief Elizabethan and Jacobean dramatists; intensive study of Shakespeare's environment and development as a dramatist, with careful reading of certain plays.

TEXT: A scholarly edition of Shakespeare's complete plays.

PREREQUISITE: English 210 and 220 or another approved course.

Day Division: Not offered 1952-53.

Evening Division: 1952-53 (lectures two hours a week).

ENGLISH 328.[16]. *Shakespeare and Milton*

Not offered 1952-53.

ENGLISH 330.[15a and 15b]. *Eighteenth Century Prose and Poetry*

Not offered 1952-53.

ENGLISH 332. *Restoration and Eighteenth Century Drama*

Not offered 1952-53.

ENGLISH 334.[S8]. *The Novel in the Eighteenth Century*

Not offered 1952-53.

ENGLISH 340.[5]. *Nineteenth Century Literature*

A study of Romantic and Victorian poetry and prose. In poetry the following writers will receive special consideration: Wordsworth, Coleridge, Byron, Shelley, Keats, Tennyson, Browning, Rossetti, Morris, Arnold, Swinburne; in prose, Wordsworth, Coleridge, Carlyle, Newman, Ruskin, Mill, Arnold. In addition the student will be required to read the following novels: Austen, *Sense and Sensibility*; Scott, *Ivanhoe*; Dickens, *David Copperfield*; Bronte, *Wuthering Heights*; Thackeray, *Vanity Fair*.

TEXTS: To be announced.

PREREQUISITES: English 220 and 330 or by arrangement with the instructor.

Day Division: 1952-53 (lectures two hours a week).

ENGLISH 342.[S9]. *Nineteenth Century Thought*

Readings in the major prose works of the Romantic and Victorian periods. (Half course.)

TEXTS: To be announced.

PREREQUISITE: For honours students; others by permission of the instructor.

Day Division: 1952-53 (seminar one hour a week, *both* terms).

ENGLISH 345.[7]. *American and Canadian Literature*

Not offered 1952-53.

ENGLISH 348.[S12]. *Canadian Poetry Since Confederation*

Not offered 1952-53.

ENGLISH 350.[3]. *English Literature from 1885 to the Present*

The literature of reaction to Victorianism and of the twentieth century. The influence on form and content of new ideas in politics, art, psychology, and religion.

TEXTS:

Hardy, *The Mayor of Casterbridge*; Butler, *The Way of All Flesh*; Bennett, *The Old Wives' Tale*; Wells, *The History of Mr. Polly*; Conrad, *Heart of Darkness*; Forster, *A Passage to India*; Lawrence, *Sons and Lovers*; Joyce, *A Portrait of the Artist as a Young Man*; Woolf, *Mrs. Dalloway*; Huxley, *Point Counter Point*; Greene, *Brighton Rock*; Wilde, *The Picture of Dorian Gray*; Salome, *The Importance of Being Earnest*; Shaw, *Mrs. Warren's Profession*, *Man and Superman*, *Saint Joan*; Synge, *The Playboy of the Western World*; O'Casey,

Juno and the Paycock; Priestley, *Three Time Plays*; Strachey, *Eminent Victorians*; Eliot, *Selected Poems* (Penguin); poetry of Hopkins, Hardy, Housman, Wilde, Kipling, Yeats, Auden, and others.

PREREQUISITE: English 210 or 220 or by arrangement with the instructor.

Day Division: 1952-53 (lectures three hours a week).

ENGLISH 352. [S3]. *Contemporary Texts*

A detailed and analytic study of several difficult twentieth-century works, notably *Ulysses*, *The Waste Land*, *Four Quartets*, and poems by Yeats and Dylan Thomas. (Half course.)

PREREQUISITE: For honours students; others by permission of the instructor.

Not offered 1952-53.

ENGLISH 355. [17]. *The English Novel*

The development of the art of fiction in English literature, from its beginnings in the eighteenth century, through the major Victorian novelists, to the chief authors of the twentieth century.

TEXTS:

Defoe, *Moll Flanders*; Richardson, *Pamela*, vol. 1; Fielding, *Tom Jones*; Austen, *Pride and Prejudice*; Scott, *The Heart of Midlothian*; Dickens, *David Copperfield*; Thackeray, *Vanity Fair*; Eliot, *Middlemarch*; Hardy, *Tess of the d'Urbervilles*; James, *The Ambassadors*; Bennett, *The Old Wives' Tale*; Galsworthy, *The Man of Property*; Forster, *Howards End*; Lawrence, *The Plumed Serpent*; Joyce, *A portrait of the Artist as a Young Man*; Woolf, *To the Lighthouse*; Huxley, *Point Counter Point*.

PREREQUISITE: English 210 or 220 or by arrangement with the instructor.

Evening Division: 1952-53 (lectures two hours a week).

ENGLISH 360. [S7]. *Literary Criticism from Aristotle to the Present*

Not offered 1952-53.

ENGLISH 370. [8a]. *Introduction to Honours in English*

A preparatory course devoted to the consideration of critical principles, methods of study and research in literature, bibliography, literary forms and types, elements of prosody, outlines of literary history. (Half course.)

PREREQUISITE: For honours students.

Day Division: 1952-53 (seminar two hours a week, *first term*).

Discontinued Courses

Last offered

ENGLISH 11. *First-year College Literature* 1948-49

ENGLISH 13. *English for Commerce Students* (Half Course) 1949-50

FINE ARTS

Sessional Lecturers in Art R. H. Hubbard, A. M., Ph. D.

Tom Wood

W. S. A. Dale, M.A.

Sessional Lecturer in Music C. H. Milligan, Mus. Bac.

Courses in the history of art are offered by Carleton College in co-operation with the National Gallery of Canada. The collections and study materials of the National Gallery afford the student unusual opportunities for direct observation.

ART

FINE ARTS 210. [1]. *A Survey of Art in Europe and America*

A survey from prehistoric to modern times. The architecture, sculpture and painting of the successive periods are studied with the object of indicating the special forms of beauty

characteristic of each period, and of interpreting art in terms of the historical, religious and economic backgrounds.

TEXTS: Roos, *An Illustrated Handbook of Art History* (Macmillan).
Pevsner, *An Outline of European Architecture* (Pelican, 1945).

Not offered 1952-53.

FINE ARTS 310. [3]. *Renaissance and Baroque Art*

Painting, sculpture and architecture from the fifteenth to the eighteenth centuries with special emphasis on the great painters.

Not offered 1952-53.

FINE ARTS 320. [5]. *Nineteenth and Twentieth Century Art*

European painting from 1800 to the present day, with reference also to sculpture and architecture.

Not offered 1952-53.

FINE ARTS 330. [2]. *The Art of North America*

The architecture, sculpture and painting of Canada, the United States and Mexico from colonial times to the present are studied in relation to European art; special emphasis is placed on Canadian art and its cultural background.

Evening Division: 1952-53 (lectures two hours a week).

FINE ARTS 350. [4]. *Studio Course in Drawing and Painting*

Working from the model and still life, students will begin with practical exercises in charcoal. Later in the course the student will be introduced to colour through the medium of his choice. (This course may be taken more than once, but only once for credit toward a degree. The fee is that of a course comprising lectures and laboratory work.)

Evening Division: 1952-53 (studio sessions six hours a week).

MUSIC

FINE ARTS 260. [Music 1]. *Music in Western Civilization*

A survey of the rise of music in the occidental world from the time of the Greeks to the present day. The course is extensive rather than intensive and will serve as an introduction to the vast field of musical history, of which only small portions are dealt with in the usual texts.

TEXTS: Finney, *A History of Music*.
Curt Sachs, *Our Musical Heritage*.

Not offered 1952-53.

FINE ARTS 360. [Music 2]. *Great Music of the 18th and 19th Centuries*

A course designed to provide a basis for intelligent listening. Music of Bach and Handel; Haydn, Mozart and Beethoven; Brahms and Wagner, will be criticized and discussed with a view to discovering the elements in some of the works of these great composers. While proficiency in music will be of great advantage to anyone taking the course, its chief purpose is to assist the average person in assessing and enjoying music in the general concert repertoire.

Evening Division: 1952-53 (lectures, listening and discussion, three hours a week).

FRENCH

Assistant Professor J. P. Young, B.A., D.ès L.

Assistant Professor and

Chairman of the Department J. S. Tassie, M.A.

Sessional Lecturers Helen R. MacDonald, B.A.

Adélaré Gascon, M.A., B.Péd., Ph.D.

G. S. DuVernet, M.A.

As Carleton College is situated in a centre where French is spoken by a large percentage of the population, much stress is laid on oral practice. Lectures are

conducted in French, as far as is possible. In addition, the students are encouraged to do a considerable amount of supplementary reading from books recommended by the instructors. A beginner's course in French is offered in the Extension Department of the College for students who have not completed junior matriculation in that subject.

FRENCH 110.[1]. *Introduction to French Literature*

The novel and short story by authors of the nineteenth and twentieth centuries. Grammar, translation, oral practice.

TEXTS: Dondo and Ernst, *French Review Grammar* (Holt)
Micks and Rideout, *Témoins d'une époque* (Oxford)
Renard, *La Vipère de Luvercy* (Copp Clark)

Day Division: Annually (lectures three hours a week; extra hours arranged).

Evening Division: Annually (lectures three hours a week). Also Summer 1952 (lectures five hours a week).

FRENCH 210.[2]. *Nineteenth Century French Literature*

Drama, novel and short story. Supplementary reading. Composition, oral practice.

TEXTS: Parker, *French Practice Book* (Heath)
Augier and Sandeau, *Le Gendre de M. Poirier* (Heath)
Balzac, *Le Père Goriot* (Scribners)
Pargment, *Trente-trois contes et nouvelles* (Holt).

PREREQUISITE: French 110.

Day Division: Annually (lectures three hours a week).

Evening Division: Annually (lectures three hours a week). Also Summer 1952 (lectures five hours a week).

FRENCH 310. *La Littérature et la pensée françaises du 17^e siècle*

La première génération des grands classiques; la deuxième génération. La querelle des Anciens et des Modernes. Travaux de traduction. Le français oral.

TEXTES:

Cornille, *Polyeucte*; Racine, *Andromaque*; Molière, *L'Avare*; Descartes, *Discours de la méthode*; Pascal, *Pensées*; Mme. de la Fayette, *Princess de Clèves*; Boileau, *L'Art poétique*; La Fontaine, *Fables*; Bossuet, *Oraisons funèbres*; La Bruyère, *Caractères*.

REFERENCE TEXTS: Ritchie and Moore, *Manual of French Composition* (Cambridge)

Cassell's *French Dictionary*

PREREQUISITE: French 210.

Day Division: Annually (lectures three hours a week).

Evening Division: 1953-54 and alternate years (lectures three hours a week).

FRENCH 315. *La Littérature et la pensée françaises du 18^e siècle*

Prolongement du classicisme. Les nouvelles idées politiques, sociales, religieuses, philosophiques. Travaux de traduction. Le français oral.

TEXTES:

Montesquieu, *Lettres persanes*; Voltaire, *Zadig*, *Lettres philosophiques*; Rousseau, *Contrat social*; Diderot, *Oeuvres choisies*; Beaumarchais, *Le Barbier de Séville*; Prévost, *Manon Lescaut*.

REFERENCE TEXTS: Ritchie and Moore, *Manual of French Composition* (Cambridge)

Cassell's *French Dictionary*

PREREQUISITE: *French 210.*

Day Division: Not offered 1952-53.

Evening Division: 1952-53 and alternate years (lectures three hours a week).

FRENCH 320. [4]. *Littérature française contemporaine*

Du symbolisme et du naturalisme à nos jours. Etude détaillée d'un choix d'oeuvres parmi les grands écrivains représentatifs d'aujourd'hui. Travaux de traduction. Le français oral.

REFERENCE TEXTS: Whitmarsh and Jukes, *Advanced French Grammar* (Longmans, Green).

Cassell's *French Dictionary*.

PREREQUISITE: *French 310 or 315.*

Day Division: Annually (lectures three hours a week).

Evening Division: 1953-54 and alternate years (lectures three hours a week).

FRENCH 330. [5]. *Littérature canadienne de langue française*

Le roman et la poésie; le folklore; la presse. Les étudiants sont invités à produire des études originales en faisant des travaux de recherches aux Archives publiques (journaux canadiens de langue française des dix-huitième et dix-neuvième siècles, et autres documents de cette époque). Travaux de traduction. Le français oral.

La poésie—Camille Roy, Morceaux choisis d'auteurs canadiens. La prose P.-A. de Gaspé, *Les Anciens Canadiens*; Gérin-Lajoie, Jean Rivard; Robert de Roquebrune, *Les Habits Rouges*; Grignon, *Un homme et son péché*; Ringuet, *30 Arpents*; Charbonneau, *Ils posséderont la terre*; Guèvremont, *Marie-Didace*; Trudel, *Vézine*; Elie, *La Fin des songes*; Gélinas, *Tit-Coq*.

REFERENCE TEXTS: Camille Roy, *Histoire de la littérature canadienne*.

Whitmarsh and Jukes, *Advanced French Grammar* (Longmans, Green).

Cassell's *French Dictionary*.

PREREQUISITE: *French 310 or 315.*

Day Division: Annually (lectures three hours a week).

Evening Division: 1953-54 and alternate years (lectures three hours a week).

FRENCH 340. [6]. *Les Maîtres de la littérature française*

Chefs-d'oeuvre de la littérature et de la pensée françaises depuis la Renaissance jusqu'au 20e siècle. Travaux de traduction et le français oral.

TEXTS: Steinhauer and Walter, *Omniibus of French Literature* (Macmillan).

G. Lanson, *Histoire de la littérature française* (Hachette).

Cassell's *French Dictionary*.

PREREQUISITE: *French 310 or 315.*

Not offered 1952-53.

Discontinued Courses

Last offered

FRENCH 3. *La Littérature et la pensée françaises des 17e et 18e siècles* . . . 1951-52

GEOGRAPHY

Sessional Lecturers . . . J. W. Watson, M.A., Ph.D., F.R.G.S.

Jessie W. Watson, M.A.

N. L. Nicholson, B.A., M.Sc., Ph.D., F.R.G.S.

GEOGRAPHY 210. [1]. *General Geography*

A geographical description of the continents, their climate and resources, together with the human, economic and political geography of the principal regions of the world.

TEXT: Davis, *Earth and Man* (Macmillan)

Evening Division: 1952-53 (lectures two hours a week).

GEOGRAPHY 320.[2]. *The Geography of Canada*

This course will outline the physical, historical and economic geography of principal Canadian regions.

TEXTS: J. L. and J. Robinson, *Canada* (Longmans, Green).

Griffith Taylor, *Canada* (Methuen).

Currie, *Economic Geography of Canada*.

Day Division: 1952-53 (lectures two hours a week, map work two hours a week).

Evening Division: Not offered 1952-53.

GEOGRAPHY 330.[3]. *World Regional Geography*

A survey of the major natural and political regions of the world. The occupancy of man in the major geographic subdivisions is studied with a view to understanding the countries of the world and their chief economic, social and political problems. Whenever possible, the geography of the major powers and countries of current significance will be considered in some detail.

TEXT: Lackey and Anderson, *Regions and Nations of the World* (Van Nostrand)

PREREQUISITE: Geography 210 or 320.

Day Division: Not offered 1952-53.

Evening Division: 1952-53 (lectures two hours a week).

See also Geology 310 (*Physiography and Structural Geology*)

History 360 (*The Economic Development of Canada*)

GEOLOGY

Sessional Lecturers . . . F. J. Alcock, B.A., Ph.D., F.R.S.C., F.G.S.A.

M. E. Wilson, B.A., Ph.D., F.R.S.C.,

F.G.S.A., F.A.A.S.

Alice E. Wilson, B.A., Ph.D., F.R.S.C.,

F.G.S.A.

S. C. Robinson, M.A.Sc., Ph.D.

GEOLOGY 210.[2]. *General Geology*

A course in general geology; the earth and solar system; minerals and rocks; the agencies of erosion; deformation within the earth (mountain building and uplift); the origin, history, and life of earth.

TEXT: Longwell, Knopf, Flint, Schuchert and Dunbar, *Outlines of Geology*.

Day Division: Annually (lectures two hours a week, laboratory two hours a week, three field excursions).

GEOLOGY 211.[2]. *General Geology*

Course outline as for Geology 210.

Evening Division: Annually (lectures two hours a week; two or three Saturday afternoon excursions).

GEOLOGY 310.[3]. *Physiography and Structural Geology*

Land forms and their origin. Physiographic cycles. Influence of surface features on human activities. The interpretation of topographic and geological maps. Rock structures and their origin: folding, faulting, metamorphism.

TEXTS: Lobeck, *Geomorphology* (McGraw-Hill).

Niven, *Structural Geology*.

PREREQUISITE: Geology 210 or 211.

Evening Division: 1952-53 (lectures two hours a week, laboratory two hours a week).

GEOLOGY 320. [4]. *Mineralogy*

An introductory course concerning the recognition, properties and occurrence of approximately 100 common minerals; basic concepts of crystal lattices symmetry and axial ratio and an introduction to crystal chemistry. Laboratory work involves megascopic examination of minerals, crystals and crystal models, and blowpipe analysis.

TEXT: E. S. Dana, *A Textbook of Mineralogy*, 4th Edition revised by W. E. Ford (Wiley, 1932).

PREREQUISITE: Geology 210 or 211 (may be taken concurrently).

Evening Division: 1952-53 (lectures two hours a week, laboratory two hours a week).

GEOLOGY 330. [5]. *Palaeontology*

The principles of palaeontology; the classification of invertebrates, their morphology and evolutionary history, with reference to the broader phases of evolution of vertebrates; and an introduction to the practical value of invertebrates in the interpretation of stratigraphy and historical geology.

REFERENCE TEXTS: Shimer, *An Introduction to the Study of Palaeontology*.
Twenhofel and Shrock, *Invertebrate Palaeontology*.
Romer, *Vertebrate Palaeontology*.

PREREQUISITE: Geology 210 or 211 or permission of the instructor.

Day Division: 1952-53 (lectures two hours a week, laboratory two hours a week).

GEOLOGY 340. *Sedimentation*

An introduction to the principles of sedimentation, including: kinds of sedimentary rocks, weathering, transportation, deposition, estimation and identification of heavy minerals, textures, structures and classification.

REFERENCE TEXT: Pettijohn, *Sedimentary Rocks*
Krumbein and Sloss, *Stratigraphy*
H. B. Milnew, *An Introduction to Sedimentary Petrography*,
with its *Supplement*

PREREQUISITES: Geology 210 or 211. Recommended: Geology 320.

Not offered 1952-53.

GERMAN

Sessional Lecturer . . . Richard Hoff, Dr. jur.

GERMAN 51. [A]. *Beginner's German*

An elementary course in German language and literature, designed to meet the needs of students who enter the College with little or no knowledge of German. The work will comprise the elements of grammar, the building up of a basic vocabulary, translation exercises, and the reading of easy German prose and poetry. (Credit is given for this course only upon the subsequent completion of German 110. If taken to make up a matriculation deficiency, no credit is allowed.)

TEXT: Curtis, *Basic German* (Prentice-Hall).

READING: Hagboldt, *Fabeln* (Heath).
Hagboldt, *Anekdoten und Erzählungen* (Heath).

Evening Division: Annually (lectures three hours a week).

GERMAN 61. [AA]. *Beginners' German for Science Students*

An elementary course for Science students. The work will comprise the elements of grammar, the building of a basic vocabulary, translation exercises and the reading of German scientific texts. (May be taken for credit only by Science students.)

TEXT: Curtis, *Basic German* (Prentice-Hall)

READING: Fiedler and Sandbach, *A First German Course for Science Students* (Oxford)

Evening Division: Annually (lectures three hours a week).

GERMAN 110. [1]. *First-year College German*

In this course the main stress will be put on reading and oral practice. Also translation from and into everyday German and a review of the elements of German grammar.

TEXTS: Hagboldt and Kaufman, *German Review and Composition* (Heath).
Schinnerer, *Reading German* (Macmillan).

READING: Durian, *Kai aus der Kiste* (Holt).

PREREQUISITE: German 51 or its equivalent.

Evening Division: Annually (lectures three hours a week).

GERMAN 210. [2]. *Second-year College German*

A comprehensive and more detailed review of German grammar; written and oral exercises in translation and composition; easy German conversation; reading of modern German prose and some of the masterworks of nineteenth century poetry.

TEXT: Chiles, *German Composition and Conversation* (Ginn).

READING: Foltin, *Aus nah und fern* (Houghton Mifflin, 1950).

Lang and Needler, *The German Reader* (Ryerson).

Fulda, *Hoehensonne* (Appleton-Century).

PREREQUISITE: German 110.

Evening Division: Annually (lectures three hours a week).

GERMAN 310. [3]. *Third-year College German*

Advanced written and oral translation exercises and composition, sight translation and conversation. Students will be encouraged to increase the fluency and correctness of their spoken German. Reading and discussion of classical and modern German prose and drama.

TEXT: Chiles, *German Composition and Conversation* (Ginn).

READING: Goethe, Prose selections (mimeo.).

Goethe, *Iphigenie auf Tauris* (Ginn)

von Hofe and Marcuse, *A German Sketchbook* (Houghton-Mifflin, 1950).

PREREQUISITE: German 210.

Evening Division: Annually (lectures two hours a week).

GERMAN 320. [5]. *Classical German Literature*

Fourth-year college German. Exercises in advanced and highly idiomatic translation. German composition. The reading will include a standard work of the classical period of German literature.

TEXT: Wanstall, *Tests in German Composition and Grammar* (Harrap).

READING: Goethe, *Faust*, Part I (Heath).

Heffner, Rehder and Twaddell, *Faust Vocabulary* (Heath).

Bithell, *An Anthology of German Poetry 1880-1940*. (Methuen).

PREREQUISITE: German 310 (may be taken concurrently).

Evening Division: 1952-53 and alternate years (lectures two hours a week).

GERMAN 330. [6]. *Modern German Literature*

An alternative course in fourth-year college German which is, at the same time, designed for students who have taken German 5 and wish to improve their knowledge further. Exercises in advanced and highly idiomatic translation. German composition. The reading will include a work by an eminent German writer of the present.

TEXTS: Wanstall, *Alternative Tests in German Composition and Grammar* (Harrap).

Waterhouse, *A Short History of German Literature* (Methuen).

READING: Hermann Hesse, *Knulp* (Oxford).

Others to be announced.

PREREQUISITE: German 310.

Evening Division: 1953-54 and alternate years (lectures two hours a week).

GREEK

(See Classics)

HISTORY

Professor James A. Gibson, B.A., B.Litt., D.Phil.

Assistant Professor and

Chairman of the Department . . . David M. L. Farr, M.A.

Lecturer Gordon S. Couse, B.A.,
(on leave of absence, 1952-53)

Sessional Lecturer J. M. McQueen, M.A.
Ronald Grantham, M.A.
Margaret W. Labarge, A.B., B.Litt.

Sessional Lecturer in

International Relations Stephen A. Czako, M.Com., Dr. rer. pol.,
Dip. Int. Law

Courses in the Department of History are designed in part to enable students to benefit from the unique resources of the national capital. Students in Canadian and colonial history are encouraged to make use, for example, of the materials of the Public Archives of Canada; students in international relations and associated subjects of the wealth of contemporary information available from the Department of External Affairs and other departments of the Government of Canada, from the information offices of the foreign missions established in Canada, and from a variety of non-governmental and voluntary agencies which maintain national headquarters in Ottawa. The Department is able to draw upon the files of the map library of the Geographical Branch (Department of Mines and Technical Surveys), and of the anthropological and other collections of the National Museum of Canada.

The aim of the Department, in upper-year courses, is to provide a sound working knowledge of documentary sources where they apply, of maps and cartographic aids to the study of history, and to assign for report in group discussions subjects which will repay investigation of the materials readily at hand. Students in the honours course will be encouraged to develop an increasing acquaintance with recent advances in historiography and bibliography.

Certain of the courses now offered have been planned in collaboration with other departments of instruction, in particular Economics, English, Political Science, and the science group.

HONOURS COURSE

A candidate for honours in History will be required to complete five years from junior matriculation, and should signify his intention of applying for admission to the honours course before beginning his third year. He should take in second year History 220 and *either* Economics 210 *or* Political Science 210.

The honours requirements consist of extensive work in History with a minor (at least four courses), ordinarily in Economics or Political Science. For the third and subsequent years, the course requirements in History will include History 230, 330, 340, 350 and 388; *either* History 320 *or* 322; and *four* of History 324, 326, 343, 353, 356, 370, 373, 380, 383.

HISTORY 110. [1]. *Main Directions in Modern History, 1870-1919*

This course will provide a preliminary survey of the main global areas under the impact of industrialism, big-power imperialism, and the competing economic and political ideas of the pre-war period. It will also provide, through discussion groups, for a consideration of specific problems of population, resources, migration, and of the principal personalities of the period. (Although intended primarily for first-year students this course may be taken for upper-year credit, in which case additional essays and reading will be required.)

TEXT: Students are recommended to provide themselves with *one* of the following:

Shapiro, *Modern and Contemporary European History* (Houghton-Mifflin).

Hall and Davis: *The Course of Europe Since Waterloo* (Appleton-Century).

Aljberg, *Sedan to Stresa: Europe from 1870* (Van Nostrand).

Day Division: Annually (lectures two hours a week, group discussion one hour a week).

Evening Division: 1952-53 (lectures two hours a week, group discussions monthly).

HISTORY 220. [9]. *The Development of Western Civilization from Mediaeval Times.*

This course is designed as a basic approach to historical developments from mediaeval times to the present which have conditioned the organization of human society. For students intending to major in history, the main interest will be to determine the extent to which the Middle Ages have set the pattern of modern society, and the extent to which modern society has departed from the mediaeval in religion, culture, political and economic practice and social organization. This study will include an evaluation, in the light of historical comparison, of the concepts which are important in contemporary society. It is intended that this course shall eventually be prerequisite for all advanced courses in European history.

TEXT: To be announced.

PREREQUISITE: History 110. (This course will ordinarily not be open to students in the third and higher years. If permission is granted to take it for upper-year credit, additional essays and reading will be required.)

Day Division: Annually (lectures and discussion three hours a week).

Evening Division: 1952-53 (lectures two hours a week, group discussion monthly).

HISTORY 230. [3]. *History of North America in the Colonial Period*

An introduction to the history of Canada and the United States, giving attention to geographic factors in North American history and the exploration and settlement of the continent to the end of the eighteenth century. The development of the Spanish, English and French empires in North America will be described, noting the political institutions, economic life and social organizations of each region. The course will conclude with the Anglo-French rivalry for North America, the American Revolution, and the effects of the Revolution settlement upon British North America to 1791.

TEXT: Long, *A History of the Canadian People*, Vol. I (Ryerson), *or* Savelle, *Foundations of American Civilization* (Clarke, Irwin).

RECOMMENDED FOR REFERENCE: Cotterill, *Short History of the Americas* (Prentice-Hall); Burpee, *Historical Atlas of Canada* (Nelson).

PREREQUISITE: History 110.

Day Division: Annually (lectures three hours a week).

Evening Division: Not offered 1952-53.

HISTORY 275.[19]. *Mediterranean Civilization in the Ancient World*
(Offered in the Department of Classics as *Classical Civilization* 275.)

HISTORY 320.[4]. *History of Europe, 500-1450.*

This course, dealing with the mediaeval foundations of European history, will investigate the emergence of a unique civilization in Western Europe; its expansion and relations with the Islamic and Byzantine civilizations; the process of development within its economy, social structure, politics, arts and intellectual activity; the role of Christianity as related to all these aspects of secular life; and the relationship between the mediaeval and modern phases of Western Civilization.

TEXT: Ferguson and Bruun, *Survey of Western Civilization*, Vol. I (Houghton-Mifflin).

PREREQUISITE: History 110.

Not offered 1952-53.

HISTORY 322.[6]. *History of Europe, 1450-1648.*

The primary concern of this course will be to arrive at an accurate appreciation of the Renaissance and the Reformation, by considering the development of the concepts themselves, the degree to which they represent, as historical phenomena, a departure from the Middle Ages and a foreshadowing of the Modern way of life, and the causes and results of the changes which they did involve.

TEXT: Ferguson and Bruun, *Survey of Western Civilization*, Vol. I, (Houghton-Mifflin).

Readings will be assigned.

PREREQUISITE: History 220, 320 or 350.

Not offered 1952-53.

HISTORY 324.[12]. *History of Europe: Westphalia to Waterloo* (1648-1815).

This course will consider the ideas of absolute monarchy in France under Louis XIV; the Puritan Revolution in England; the rise of Russia and changes in the Baltic area; the growth of Prussia and the rebirth of Austria in German affairs; Great Britain and France in the eighteenth century; the competition for empire in the eighteenth century; the enlightened despots; the beginnings of the Industrial Revolution; the Age of Reason; the French Revolution and the age of Napoleon in Europe.

TEXT: Ferguson and Bruun, *Survey of European Civilization*, Vol. II (Houghton-Mifflin).

RECOMMENDED FOR REFERENCE: Stearns, *Pageant of Europe* (Harcourt, Brace).

PREREQUISITE: History 320 or 322.

Not offered 1952-53.

HISTORY 326.[14]. *History of Modern Europe, 1815-1919*

This course will commence with a description of Europe in the era of the French Revolution and Napoleon as the setting for modern European history. The Congress of Vienna and the period of international government in Europe, the era of revolutions to 1848, the impact of the Industrial Revolution, the making of Italy, the consolidation of Germany, the Franco-Prussian War, Russia and the Near Eastern Question, national policies after 1871, cultural trends in the nineteenth century and the diplomatic prelude to World War I will be considered as important features of the history of Europe in the nineteenth century.

TEXT: Hall and Davis, *The Course of Europe Since Waterloo* (Appleton-Century).

RECOMMENDED FOR REFERENCE: Stearns, *Pageant of Europe* (Harcourt, Brace).

PREREQUISITE: History 320 or 322 or 324.

Day Division: 1952-53 (lectures three hours a week).

HISTORY 330.[13]. *Canada from 1791: The Evolution of Canadian Self-Government*

This course will consider at the outset the transition from French Canada to British North America, and the political conflicts which arose from differences in racial background and political experience. In addition to emphasis on the constitutional evolution from representative to responsible government, and from federation to autonomy, attention will be given to influences on the government of Canada from Britain and from the United States, and to the emergence of Canada into the world community.

TEXTS: Kennedy, *The Constitution of Canada* (Oxford).

Brebner, *North Atlantic Triangle* (Ryerson).

PREREQUISITE: History 230 or permission of the Department.

Day Division: Annually (lectures three hours a week).

Evening Division: Not offered 1952-53.

HISTORY 340.[8]. *History of the United States of America*

This course will consider the colonial background of American history; the American Revolution and the making of the Constitution; the expansion of the Union, the sectional struggle, the Civil War, the era of reconstruction; the emergence of modern America, the political history of the United States after 1877, and the United States in world politics.

TEXT: Faulkner, *American Political and Social History* (Crofts).

RECOMMENDED FOR REFERENCE: Commager, *Documents of American History* (Crofts); *American History Atlas* (Hammond).

PREREQUISITE: History 230.

Not offered 1952-53.

HISTORY 343.[18]. *Canada-United States Relations, 1898-1948*

This course, designed primarily for honour students in history, political science; economics, public administration and journalism, will trace the growth of official and non-official machinery in the relations between the two countries, with special emphasis on the period 1938-1948. It will likewise consider the impact of the principal personalities of the period, and attempt to assess the importance in the world community of the example of Canada-U.S. co-operation. Individual report projects will be assigned.

TEXT: Brebner, *North Atlantic Triangle* (Ryerson).

RECOMMENDED FOR REFERENCE: McInnis, *The Unguarded Frontier* (Doubleday-Doran).

PREREQUISITE: Permission of the Department.

Not offered 1952-53.

HISTORY 350.[5]. *English History to 1689*

This course will consider the settlement of peoples and the growth of corporate life in early Britain; continental invasions and feudal organization; the emergence of an English spirit and its expression in the monarchy and Parliament. Careful attention will be given to the constitutional developments reflected both in national and local government under the Tudor and the Stuart sovereigns.

TEXT: Trevelyan, *History of England* (Longmans).

RECOMMENDED FOR REFERENCE: Stephenson and Marcham, *Sources of English Constitutional History* (Harpers).

PREREQUISITE: History 320 or 322.

Not offered 1952-53.

HISTORY 353.[10]. *English Social History*

This course is designed especially to accommodate students who wish a comprehensive knowledge of English history as a background for other fields of specialization such as English literature, political science, economics and social policy. Its central theme will be the transition from feudal to modern social organization and habits of daily life. This will involve, however, an examination of its causal relationship with economic and political practice, intellectual speculation, religious belief and the arts. There will be opportunities for private investigation in special spheres of interest.

TEXT: Trevelyan, *English Social History* (Longmans).

PREREQUISITE: History 110.

Not offered 1952-53.

HISTORY 356.[15]. *English History from 1689*

This course will consider mainly the constitutional development of England from the Revolution Settlement until the outbreak of the First World War, with special reference to the development of cabinet government, the development of party mechanisms, reaction and reform in the parliamentary structure, and the social and political outlook of Victorian England. Opportunity will be offered for intensive work on documentary sources touching upon constitutional development.

TEXTS: Trevelyan, *History of England* (Longmans).

Robertson, *Select Statutes, Cases and Documents* (Methuen).

PREREQUISITE: History 350. Recommended: History 324.

Not offered 1952-53.

HISTORY 360.[23]. *The Economic Development of Canada*

This course is designed as an advanced course in the economic history and economic development of Canada. It will give special attention to the influences of geography and physical environment and the impact of ideas and institutions from other areas upon North American development. Extensive reading and report topics will be assigned.

TEXT: To be announced.

PREREQUISITES: Economics 210 and History 230. (This course will ordinarily be open only to students in the third or higher years.)

Day Division: Not offered 1952-53.

Evening Division: 1952-53 (lectures two hours a week, group discussion two hours fortnightly).

HISTORY 370.[7]. *British Expansion Overseas and the British Empire*

This course will begin with a survey of the movements of people and ideas in the great age of maritime discovery. It will deal with the interaction of official policy and commercial opinion and with the British reaction to the "instinct of Empire" from 1783 onwards, concluding with consideration of the ideas of the "undeveloped estate". Special attention will be given to 20th century advances towards self-government in the dependent empire, and to the operation of the Colonial Welfare and Development Acts since 1945.

TEXTS: Williamson, *A Short History of British Expansion* (Macmillan).

Knaplund, *The British Empire, 1815-1939* (Harpers).

Carrington, *An Exposition of Empire* (Cambridge University Press).

Contemporary reading will be assigned.

PREREQUISITE: History 322 or permission of the Department. Recommended History 230.

Day Division: 1952-53 (lectures and discussion three hours a week).

HISTORY 373.[17]. *The British Commonwealth of Nations*

This course, designed primarily for honours students in history, political science, economics, journalism, and public administration, will deal with the philosophy, structure, and development of the Commonwealth association under the Crown. It will survey the formation and expression of opinion, both official and non-official, regarding Commonwealth policies. Official documents will be drawn upon extensively, and individual report projects will be assigned.

TEXT: To be announced.

RECOMMENDED FOR REFERENCE: Hodson, *Twentieth-Century Empire* (Faber); Mansergh, *The Commonwealth and the Nations* (Oxford); Carter, *The British Commonwealth and International Security* (Oxford); Soward, *The Changing Commonwealth* (Oxford).

PREREQUISITE: Permission of the Department.

Not offered 1952-53.

HISTORY 380. [16]. *An Introduction to International Relations, 1919-1939*

This course is designed primarily for upper-year students majoring in history, political science, public administration, economics, commerce and journalism.

In 1952-53, it will deal specifically with geographical, ethnographical, economic, social and cultural characteristics of European peoples in the first half of the 20th century. In addition to consideration of the nationalistic, linguistic and religious characteristics of the peoples of continental Europe, it will deal also with main economic and social developments and with the most important achievements in the arts, letters and sciences.

TEXTS: Ault, *Europe in Modern Times* (Heath)

Carr, *International Relations between the Two World Wars, 1919-1939* (Macmillan)

RECOMMENDED FOR REFERENCE: Potter, *An Introduction to the Study of International Organization* (Appleton-Century); *Complete World Atlas* (Hammond, New York)

PREREQUISITE: Permission of the Department.

Evening Division: 1952-53 (lectures two hours a week, group discussion two hours fortnightly).

HISTORY 383. [24]. *Modern Diplomatic History, 1878-1945*

This course, designed for senior students majoring in the social sciences, will give special attention to the alliance and *entente* systems of the European powers and to rivalries in colonial policies and the resulting spheres of influence. It will also consider the principal personalities within the alliance system; the approach to judicial settlement by conferences; the diplomatic background of the First World War; the peace settlements and the inter-war period, culminating in a documentary study of the onset of the Second World War and the peace treaties which emerged from it.

TEXT: Bennis, *European History since 1870* (Appleton-Century)

RECOMMENDED FOR REFERENCE: Petrie, *Diplomatic History*, (London: Hollis & Carter, 1948); *Complete World Atlas* (Hammond, New York)

PREREQUISITE: Permission of the Department. (This course will ordinarily be open only to students in the fourth and higher years.) A reading knowledge of French will be desirable.

Not offered 1952-53.

HISTORY 388. [25]. *The Philosophy of History*

This course seeks to provide students in various fields of specialization with an opportunity to consider the place which the study of history occupies with the total range of intellectual disciplines, and the contribution which it has made towards answering the fundamental questions of human speculation. It will proceed from a discussion of the methods and limits of historical investigation to a critical treatment of Greek, Roman and European philosophies of history. It will be the responsibility of participants to read, in preparation for class discussions, the major works under consideration and to undertake some research upon implicit philosophies in representative works of various periods.

TEXTS: To be announced.

PREREQUISITE: Permission of the Department. (This course will ordinarily be open only to students in the fourth and higher years, and preference will be given to students in honours courses in any department.)

Not offered 1952-53.

HISTORY 390.[35]. *Dissertation for Honours in History*

Candidates for specific honours in History will be required to present, at the end of their fifth year, a dissertation involving research into a problem of historical interpretation, and presentation of it in a fashion displaying an adequate competence in historical method. The subject for research will be settled in consultation with the Department and a supervisor will be assigned. The candidate will be publicly examined upon his dissertation after presentation.

Day Division: Annually (tutorial hours arranged).

HISTORY 396. [S1]. *Fourth-year Honours Seminar*

This seminar will discuss problems of historical method, including the sources of history, the essentials of historical research, historical criticism, the weighing of evidence, bias in historical recording, and the mechanics and vocabulary of historical writing with special emphasis on the preparation of historical papers. (Credit for this seminar will be given only if it is taken in conjunction with a History honours course.) (Half course.)

Day Division: 1952-53 (one tutorial hour a week, *both* terms).

*Discontinued Courses**Last offered*

HISTORY 2. *History of the United States and Canada since 1763* 1946-47

HISTORY 2. *History of Europe, 1400-1789* 1948-49

HISTORY 11. *North America and the Modern World* 1949-50

JOURNALISM

Professor and Director of

the Department . . . Wilfrid Eggleston, M.B.E., B.A.

Lecturer W. H. Kesterton, B.A., B.J.

Sessional Lecturer . . . J. Douglas Leechman, B.Sc., M.A., Ph.D.

Seminar Leaders W. B. Herbert, B.A., LL.B.

Leslie McFarlane

Tom Foley

Field Work Supervisor . Vincent Pask

Note: Journalism subjects may be taken only by candidates for the degree of Bachelor of Journalism.

JOURNALISM 210. *Preparatory Lectures for Second-year Journalism Students.*

A series of meetings with members of the staff of the Department of Journalism will be arranged for the guidance of students enrolled in the second year of the Journalism course. This series will include several introductory talks on the history and craft of journalism, practical exercises, and vocational counsel. Details as to dates, themes, and instructors will be published on the bulletin board early in the teaching term. Second-year Journalism students will be expected to attend these sessions, which will be listed in the official schedule of classes, but the lectures yield no academic credit and no tuition fee is charged for them.

Day Division: Annually (lectures arranged).

JOURNALISM 310.[1]. *Introduction to Journalism*

A broad survey of the whole field. Discussion of free lance writing, with practical exercises in the magazine article, the newspaper feature and the short story. Marketing. Personal qualifications and opportunities. Some account will be given of outstanding journalists and publications in Canada and elsewhere.

RECOMMENDED READING: Wolseley and Campbell, *Exploring Journalism* (Prentice-Hall).

Day Division: Annually (lectures and practical exercises, four hours a week).

JOURNALISM 320.[2]. *Fundamentals of Reporting*

The nature of news values; how to recognize and collect news; how to analyse, organize and report it. Interviewing and news gathering. This is mainly a practical course, based on assignments in reporting and other forms of writing.

RECOMMENDED READING: Wolseley and Campbell, *Exploring Journalism* (Prentice-Hall).

Day Division: Annually (lectures and practical exercises, four hours a week; group discussions).

JOURNALISM 330.[3]. *Editing*

Copy-reading and head-writing. This course will provide practical instruction in the duties and responsibilities of the deskman, and training in reading copy and writing headlines. The responsibilities and opportunities of the editor in his community will be discussed; the ethics of journalism; freedom of the press; the law and the press; censorship in war and peace; news policy; the sources and interpretation of foreign news; layout; the use of illustrations.

TEXT: Bastian and Case, *Editing the Day's News* (Macmillan).

PREREQUISITE: Journalism 310.

Day Division: Annually (lectures three hours a week).

JOURNALISM 340.[4]. *Interpretative Reporting*

Coverage of governmental activities and other specialized fields such as business, music, drama, the film, politics, the popularization of science, the column; the book review. Development of sources and contacts. Writing for the ear in the radio newscast, the radio talk and commentary. This will be mainly a practical course based on assignments. Methods of research; filing; work in newspaper library and morgue.

TEXT: MacDougall, *Interpretative Reporting* (Macmillan).

PREREQUISITE: Journalism 320.

Day Division: Annually (lectures and practical exercises averaging four or five hours a week).

JOURNALISM 350.[5]. *Career Seminar in Journalism*

Round table discussions with guest speakers. Each student in Journalism 350 will be required to choose a current topic of Canadian interest for extensive live research and study as preparation for an oral report, which will be followed by questioning from instructor and group. Vocational guidance. Groups will be arranged whenever possible to meet the needs of those who have special interests or ambitions.

PREREQUISITE: For final year Journalism students.

Day Division: Annually (Round table sessions, two hours a week).

LATIN

(See Classics)

MATHEMATICS

Professor and

Chairman of the Department . . . L. N. Richardson, M.A., M.Sc.

Associate Professor . . . M. S. Macphail, M.A., D.Phil.

Assistant Professor . . . J. W. Mayne, M.A., M.Sc., (on leave of absence, 1952-53)

Sessional Lecturers . . . Nathan Keyfitz, B.Sc.

J. G. Enns, M.A.

L. W. Rentner, B.A.

R. F. Wilson, B.A.

R. G. Stanton, M.A., Ph.D.

R. J. Semple, M.A.

T. G. Donnelly, M.A.

J. A. Powell, B.A., D.Phil.

J. R. Walter, B.A.

MATHEMATICS MAJOR

Pass students who are majoring in Mathematics must take Mathematics 210 and 310 and should choose at least three additional full courses (or the equivalent in half courses) from the following: Mathematics 220, 230, 235, 250, 255, 260, 320, 325, 330, 335, 345, 350, 355.

HONOURS COURSE

Honours students in Mathematics take nine or more full courses (or the equivalent in half courses), chosen in consultation with the Department.

MATHEMATICS 110.[1]. *Algebra*

Ratio, proportion, variation, theory of quadratics, solution of equations, the progressions, interest and annuities, the function, permutations and combinations, binomial theorem. (Half course.)^{*}

TEXT: Petrie, Baker, Levitt and MacLean, *Algebra*

Day Division: Annually (lectures two hours a week, *both* terms).

Evening Division: Annually (lectures two hours a week, *both* terms). Also Summer 1952 (lectures $2\frac{1}{2}$ hours a week).

MATHEMATICS 111.[1]. *Geometry*

Cartesian and polar co-ordinates. The straight line, circle and conics with some elementary properties. (Half course.)^{*}

TEXT: Durrant and Kingston, *A New Analytic Geometry*

Day Division: Annually (lectures two hours a week, *both* terms).

Evening Division: Annually (lectures two hours a week, *both* terms). Also Summer 1952 (lectures $2\frac{1}{2}$ hours a week).

MATHEMATICS 112.[1]. *Trigonometry*

Fundamental formulae, solution of triangles, logarithms, applications to problems in statics. (Half course.)^{*}

TEXT: Miller and Rourke, *Plane Trigonometry and Statics*

Day Division: Annually (lectures two hours a week, *both* terms).

Evening Division: Annually (lectures two hours a week) *both* terms. (Also Summer 1952 (lectures $2\frac{1}{2}$ hours a week).

MATHEMATICS 210.[2]. *Calculus*

An introductory course in differential and integral calculus, with emphasis on the fundamental processes and applications.

TEXT: Love, *Elements of Differential and Integral Calculus*.

PREREQUISITE: Mathematics 110, 111, 112.

Day Division: Annually (lectures three hours a week).

Evening Division: Annually (lectures three hours a week). Also Summer 1952 (lectures five hours a week).

MATHEMATICS 220.[3a]. *Mathematics of Investment*

Simple and compound interest, discount, annuities, perpetuities, amortization, sinking funds, bonds, debentures, depreciation, probability and its application to life insurance. (Half course.)

TEXT: Hart, *Mathematics of Investment*.

PREREQUISITE: Mathematics 110, 111.

Day Division: Annually (lectures two hours a week, *both* terms).

Evening Division: Annually (lectures $1\frac{1}{2}$ hours a week, *both* terms).

Also Summer 1952 (lectures $2\frac{1}{2}$ hours a week).

^{*}Any one of Mathematics 110, 111, 112 carries half-course credit. Full-course credit is given when two or three of these are taken. Students are reminded that all three are prescribed in the first year of the B.Sc. and the B.Com. courses, and for entry to the Engineering course. The tuition fee for one of the three is that of a half course; the fee for any two or three, taken in the same year, is that of a full course.

MATHEMATICS 230.[3b]. *Elementary Mathematical Statistics—Part I*

Graphs, tables, frequency distributions, averages and measures of central tendency, dispersion, skewness, kurtosis, elementary probability, probability distributions, elements of sampling, statistical inference, sample analysis of pairs of measurements, applications to data in physical, biological and other scientific fields. (Half course). (See also Economics 320, *Statistical Methods in the Social Sciences*.)

TEXT: Wilks, *Elementary Statistical Analysis*.

PREREQUISITE: Mathematics 110, 111.

Evening Division: 1952-53 (lectures three hours a week, *first term*). Also Summer 1952 (lectures 2½ hours a week).

MATHEMATICS 235.[3c]. *Elementary Mathematical Statistics—Part II*

Regression and correlation theory, probability distributions, index numbers and analysis of time theories, statistical inference, chi-square tests, simple analysis of variance. (Half course.)

TEXT: Wilks, *Elementary Statistical Analysis*.

PREREQUISITE: Mathematics 230.

Evening Division: 1952-53 (lectures three hours a week, *second term*).

MATHEMATICS 240.[4b]. *Analytic Geometry*

Review of the conic sections and simple properties. Introduction to solid analytic geometry. (Half course.)

TEXT: Rider, *Analytic Geometry*.

PREREQUISITE: Mathematics 110, 111, 112.

Day Division: Annually, for first year Engineering students only (lectures three hours a week, *first term*). (Non-engineering students are referred to Mathematics 250.)

MATHEMATICS 245.[4a]. *Algebra and Spherical Trigonometry*

Solution of equations, complex numbers, determinants, infinite series, annuities, spherical trigonometry. (Half course.)

TEXT: Rosenbach and Whitman, *College Algebra*.

PREREQUISITE: Mathematics 110, 111, 112.

Day Division: Annually, for first year Engineering students only (lectures three hours a week, *second term*). (Non-engineering students are referred to Mathematics 255.)

MATHEMATICS 250.[9a]. *Analytic Geometry*

Properties of the conics, homogeneous co-ordinates. Introduction to solid geometry. (Half course.)

TEXT: Smith, Salkover and Justice, *Analytic Geometry*.

PREREQUISITE: Mathematics 110, 111.

Day Division: Annually (lectures three hours a week, *second term*).

Evening Division: 1952-53 (lectures three hours a week, *second term*).

MATHEMATICS 255.[9b]. *Algebra*

Theory of equations, complex numbers, logarithms, determinants, mathematical induction and infinite series. (Half course.)

TEXT: Rosenbach and Whitman, *College Algebra*.

PREREQUISITE: Mathematics 110, 111.

Day Division: Annually (lectures three hours a week, *first term*).

Evening Division: 1952-53 (lectures three hours a week, *first term*).

MATHEMATICS 260. [9c]. *Intermediate Algebra*

Eliminants, resultants, and discriminants; fundamental theorem of algebra; Sturm's Theorem; theory of equations; integers, rings, groups, matrices and determinants. (Half course.)

TEXT: Weiss, *Higher Algebra for Undergraduates*

REFERENCE: Dickson, *Theory of Equations*

PREREQUISITE: Mathematics 255.

Day Division: Annually (lectures three hours a week, *second* term).

MATHEMATICS 310. [8]. *Differential and Integral Calculus*

A second course in calculus with an introduction to differential equations.

TEXT: Love, *Differential and Integral Calculus*.

PREREQUISITE: Mathematics 210.

Day Division: Annually (lectures three hours a week).

Evening Division: 1952-53 (lectures three hours a week).

MATHEMATICS 320. [11]. *Advanced Calculus*

Partial derivatives, infinite series, Riemann integral, line and surface integrals, Gamma and Bessel functions, Laplace's equation.

TEXT: Sokolnikoff, *Advanced Calculus*.

PREREQUISITES: Mathematics 240 and 245, or 250 and 255, and Mathematics 310.

Day Division: 1952-53 and alternate years (lectures three hours a week).

Evening Division: 1953-54 and alternate years (lectures three hours a week).

MATHEMATICS 325. [16b]. *Differential Equations*

Ordinary differential equations and an introduction to partial differential equations. (Half course.)

TEXT: Piaggio, *Differential Equations*

PREREQUISITE: Mathematics 310.

Day Division: Annually (lectures three hours a week, *second* term).

MATHEMATICS 330. [10]. *Algebra*

Integral domains, fields, polynomials, group theory, vectors and vector spaces, algebra of matrices, linear groups, algebra of classes, rings and ideals, algebraic number fields.

TEXT: Van der Waerden, *Modern Algebra*

PREREQUISITE: Mathematics 260.

Day Division: Annually (lectures three hours a week).

MATHEMATICS 335. [13]. *Statistical Analysis*

A second course in statistics with emphasis on applications in various scientific fields. The course will include: correlation, simple multiple, and partial; small sample theory; chi-square tests, analysis of variance, simple and complex; analysis of covariance; testing hypotheses; introduction to the efficient design of experiments.

TEXT: To be announced.

PREREQUISITE: Mathematics 230, 235.

Evening Division: 1952-53 (lectures three hours a week).

MATHEMATICS 345. [15a]. *Solid Analytic Geometry*

Lines and planes; quadrics, ruled surfaces. Transformation to principal axes. (Half course.)

TEXT: Olmsted, *Solid Analytic Geometry*.

PREREQUISITE: Mathematics 250, 255.

Day Division: Annually (lectures three hours a week, *first term*).

MATHEMATICS 350. [15b]. *Numerical Methods*

Finite differences, least squares, nomograms. (Half course.)

TEXT: To be announced.

PREREQUISITES: Mathematics 210, 250, 255.

Day Division: 1952-53 (lectures three hours a week, *second term*).

MATHEMATICS 355. [20a and 20b]. *Probability and Statistical Inference*

Logical foundations and axiomatic treatment of probability. Distribution functions in one or more dimensions. Stieltjes integrals. Moments. Binomial, normal, Poisson, chi-squared, t, F distributions. Generating and characteristic functions. Limit theorems. Stochastic convergence and the law of large numbers. Fundamentals in estimation and testing hypotheses. Criteria of consistent, efficient and sufficient estimates. The method of maximum likelihood. The power of a test. Illustrations from physical, biological and social sciences.

TEXT: Mood, *Introduction to the Theory of Statistics*

PREREQUISITE: Mathematics 310.

Evening Division: 1952-53 and alternate years (lecture three hours a week).

MATHEMATICS 365. [12a]. *Complex Variable*

General properties of analytic functions. (Half course.)

TEXT: Copson, *Theory of Functions of a Complex Variable*.

REFERENCE: Truesdell, *A Unified Theory of Special Functions*

PREREQUISITE: Mathematics 320.

Day Division: 1953-54 and alternate years (lectures three hours a week, *first term*).

Evening Division: 1952-53 and alternate years (lectures three hours a week, *first term*).

MATHEMATICS 370. [12b]. *Special Functions*

TEXT: Truesdell, *A Unified Theory of Special Functions*.

PREREQUISITE: Mathematics 365.

Day Division: 1953-54 and alternate years (lectures three hours a week, *second term*).

Evening Division: 1952-53 and alternate years (lectures three hours a week, *second term*).

MATHEMATICS 375. [17]. *Differential and Integral Equations*

Initial and boundary value problems. The Laplace transform, operational mathematics.

TEXT: Goursat, *Differential Equations*

REFERENCES: Churchill, *Modern Operational Mathematics in Engineering*
Ince, *Ordinary Differential Equations*

PREREQUISITES: Mathematics 320, 325.

Day Division: Annually (lectures three hours a week).

MATHEMATICS 380. [18a]. *Differential Geometry*

Theory of curves and surfaces. (Half course.)

TEXT: Eisenhart, *Differential Geometry*.

PREREQUISITE: Permission of the Department.

Day Division: 1952-53 and alternate years (lectures three hours a week, second term).MATHEMATICS 385. [19a]. *Projective Geometry*

(Half course.)

TEXT: Coxeter, *The Real Projective Plane*.

PREREQUISITE: Mathematics 330, 345.

Day Division: 1953-54 and alternate years (lectures three hours a week,MATHEMATICS 390. [21a]. *Problems in Mathematics*

Honours students work a number of advanced problems drawn from various sources. No lectures are given. (Half course.)

PREREQUISITE: Open only to honours Mathematics students.

Day Division: Annually (tutorial hours arranged).MATHEMATICS 395. *Directed Special Studies*

Honours students may be required to present a report or thesis on parts of mathematics not included in the courses listed above. (Half course.)

PREREQUISITE: Open only to honours Mathematics students.

Day Division: Annually (tutorial hours arranged).*Discontinued Courses**Last offered*

MATHEMATICS 5. <i>Calculus</i>	1951-52
MATHEMATICS 6. <i>Calculus</i>	1951-52
MATHEMATICS 7. <i>Spherical Trigonometry</i>	1949-50
MATHEMATICS 14. [Statistics 2]. <i>Statistical Services</i>	1950-51

MUSIC

(See Fine Arts)

PHILOSOPHY

Associate Professor . . Hans Jonas, Ph.D.*Assistant Professor and**Chairman of the Dept.* C. G. S. McKeown, M.A.*Sessional Lecturer* . . . W. J. Huggett, M.A.*Assistant* Eve J. Hampson, B.A.PHILOSOPHY 210. *Introduction to Philosophy*

This course is designed to introduce the student to the major and persistent problems in philosophy. Some basic issues in metaphysics and theory of knowledge, in logic and semantics, and in theory of value, will be investigated. Selected readings in the original literature will be assigned for intensive study.

Day Division: Annually (lectures two hours a week, discussion one hour a week).

Evening Division: Annually (lectures two hours a week, discussion one hour a week). Also Summer 1952 (lectures five hours a week).

PHILOSOPHY 310. [3]. *History of Philosophy: Ancient*

Early Greek philosophy and the origin of science; the Sophists; the rôle of Socrates; Greek education; the systems of Plato and Aristotle. Certain dialogues of Plato and selections from Aristotle will be studied intensively.

PREREQUISITE: Philosophy 210 or permission of the Department.

Day Division: Annually (lectures two hours a week, discussion one hour a week).

Evening Division: 1953-54 and alternate years (lectures two hours a week, discussion one hour a week).

PHILOSOPHY 320. [4]. *History of Philosophy: Modern*

A survey of philosophy from the Renaissance, with special study of continental rationalism (Descartes, Spinoza, Leibniz), English empiricism (Locke, Berkeley, Hume), the critical philosophy of Kant. Extensive readings in the original literature will be required.

PREREQUISITE: Philosophy 310.

Day Division: Annually (lectures two hours a week, discussion one hour a week).

Evening Division: 1952-53 and alternate years (lectures two hours a week, discussion one hour a week).

PHILOSOPHY 330. [5]. *Twentieth Century Philosophy*

This course is designed to conclude the historical survey of philosophy and also to provide a systematic investigation of certain main problems arising in contemporary theory of knowledge. Extensive readings from Bergson, James, Dewey, Lewis, Moore, Ayer, Russell, Price.

PREREQUISITE: Philosophy 320 or permission of the Department

Not offered 1952-53.

PHILOSOPHY 340. *Ethics*

The nature of central propositions within the principal ethical theories will be studied with a view to determining the criteria of moral judgments. Students will read several classical texts (e.g., Plato's *Republic*, Aristotle's *Ethics*, Mill's *Utilitarianism*, Kant's *Metaphysic of Morals*) as well as important present-day contributions to ethical theory: by Moore, Ross, Stevenson, Toulmin.

PREREQUISITE: Philosophy 210 or permission of the Department.

Day Division: 1952-53 (lectures two hours a week, discussion one hour a week).

PHILOSOPHY 350. [7]. *The Theory of God in Western Philosophy and Religion*

The God of Being: 'ontological theology' (Plato, Aristotle, Plotinus, Spinoza). The God of History (the Hebrew prophets, Christian Eschatology, Hegel). The God of the soul (Augustine, the Mystics). The God of reflective selfhood: 'anthropological theology' (St. Paul, Pascal, Kierkegaard, Dostoyevsky). The God of Nihilism (the Gnostics; Nietzsche and Epicurus).

PREREQUISITE: Philosophy 320 or permission of the Department.

Day Division: 1952-53 (seminar two hours a week).

PHILOSOPHY 380. *Seminar for Advanced Students*

This course, intended for final-year students majoring in philosophy, will consider problems in philosophy answering the particular interests of the students concerned. Extensive readings will be required. There will be preparations of numerous papers and discussions of them.

PREREQUISITE: Permission of the Department.

Day and Evening Divisions: 1952-53 (seminar two hours a week).

See also History 388, *The Philosophy of History*

Political Science 370, *Seminar in Modern English Political Thought*

Political Science 375, *Seminar in European Political Thought*

Political Science 380, *Seminar in Political Philosophy (The State and the Individual)*

RELIGIOUS KNOWLEDGE 320. *The Great Non-Christian Religions.*

Discontinued Courses

Last offered

PHILOSOPHY 2. *Introduction to Philosophy* 1948-49

PHILOSOPHY 2. *Critical Thinking* 1951-52

PHILOSOPHY 6. *Theory of Value* 1951-52

PHYSICS

Associate Professor and

Chairman of the Department A. M. Munn, M.Sc., Ph.D.

Assistant Professor G. R. Love, M.A., Ph.D.

Lecturers T. J. S. Cole, B.Sc.(Eng.), B.Sc., A.C.G.I.
A. C. Ghosh, M.Sc.

Students planning to take but one course in Physics should take Physics 110.

Students taking Physics as a minor should take Physics 210 and 305 and any others as specified by the department of their major.

Pass B.Sc. or B.A. students taking Physics as a major must take Physics 210, 305, 315, 320, and 330, and at least one of Physics 310, 318, 325.

Students planning to honour in Physics will take all physics courses described in the calendar with the exception of Physics 330. At as early a stage as possible they should consult the head of the Department.

Students at the end of the fourth and fifth year of honours Physics will not write examinations in separate courses, as they are outlined in the calendar, but rather comprehensive examinations covering the whole field of Physics and relevant Mathematics.

PHYSICS 110.[1]. *Basic Physics*

This is planned for students who will not be taking any further courses in Physics. Physics is presented as it has developed in history; and as it now exists as an organized scheme of and method for acquiring knowledge.

TEXT: To be announced.

PREREQUISITE: Mathematics 110, 111, 112 (may be taken concurrently).

Day Division: Annually (lectures two hours a week, laboratory and problems three hours a week).

PHYSICS 210.[2a and 2b]. *General Physics*

Elementary mechanics, heat, properties of matter, wave-motion, light, and sound.

TEXT: Sears, *Principles of Physics*, Vol. I

PREREQUISITE: Mathematics 210 (may be taken concurrently).

Day Division: Annually (lectures and problems three hours a week, laboratory three hours a week).

Evening Division: To be offered 1953-54.

PHYSICS 305.[3a and 3b]. *Electricity*

This covers electricity at an intermediate level from electrostatics through direct current flow, electromagnetism to alternating current circuits and elementary electronics.

TEXT: Sears, *Principles of Physics*, Vol. II.

PREREQUISITE: Mathematics 210. (Mathematics 310 should be taken concurrently.)

Day Division: Annually (lectures and problems three hours a week, laboratory three hours a week).

Evening Division: 1952-53 (lectures and problems three hours a week, laboratory three hours a week).

PHYSICS 306.[3a]. *Elementary Electricity*

The first half of Physics 305: electrostatics, direct and current flow, magnetism, and elementary electromagnetic phenomena. (Half course.)

Day Division: Annually, for second-year, Course B, Engineering students only (lectures and problems three hours a week, laboratory three hours a week, *first term*).

PHYSICS 310.[4]. *Thermodynamics*

An advanced course in heat and thermodynamics.

TEXT: Zemansky, *Heat and Thermodynamics*

PREREQUISITES: Physics 210 and Mathematics 210.

To be offered 1953-54.

PHYSICS 315.[5a]. *Physical Optics*

An advanced course in optics.

TEXT: Jenkins and White, Physics 210 and Mathematics 210.

PREREQUISITES: Physics 210 and Mathematics 210.

Day Division: Not offered 1952-53.

Evening Division: 1952-53 (lectures and problems three hours a week, laboratory three hours a week).

PHYSICS 318.[12]. *Electronics*

A.C. circuit analysis and a thorough discussion of the application of vacuum and gas tubes.

TEXT: Seeley, *Electron Tube Circuits*.

PREREQUISITES: Physics 305 and Mathematics 210.

To be offered 1953-54.

PHYSICS 320.[6]. *Vector Mechanics*

An intermediate course on mechanics, using methods of vector analysis.

TEXT: Synge and Griffith, *Principle of Mechanics*.

PREREQUISITES: Physics 210 and Mathematics 210. (Mathematics 310 should be taken concurrently.)

Day Division: 1952-53 (one three-hour seminar a week).

Evening Division: 1953-54 (one three-hour seminar a week).

PHYSICS 325.[7]. *Electromagnetism*

An advanced study of electromagnetism, using the methods of vector analysis.

TEXT: Harnwell, *Principles of Electricity and Electromagnetism*.

PREREQUISITES: Physics 305 and Mathematics 210 and 310. (Mathematics 310 may be taken concurrently.)

Day Division: 1952-53 (one three-hour seminar a week).

Evening Division: Not offered 1952-53.

PHYSICS 330. [8]. *Atomic Physics*

The molecular-atomic theory of matter.

TEXT: Semat, *Atomic Physics*.

PREREQUISITES: Physics 210 and 305, and Mathematics 210. (Physics 305 may be taken concurrently.)

Day Division: 1952-53 (one three-hour seminar and one three-hour laboratory period a week).

Evening Division: Not offered 1952-53.

PHYSICS 335. [9]. *Theoretical Physics*

Advanced mechanics and an introduction to wave mechanics, matrix mechanics and relativistic theory.

TEXT: Slater and Frank, *Theoretical Physics*.

PREREQUISITE: For fifth-year honours Physics students only, except by special permission of the Department.

Day Division: 1952-53 (one three-hour seminar a week).

PHYSICS 340. [10]. *Modern Physics*

Topics included are: Heat, kinetic theory of gases, statistical mechanics, nuclear physics, and electromagnetic theory with applications.

TEXTS: Slater and Frank, *Theoretical Physics*.

Richtmyer and Kennard, *Modern Physics*.

PREREQUISITE: Open to students honouring in physics.

Day Division: 1953-54 (one three-hour seminar a week).

PHYSICS 345. [11]. *Laboratory Technique*

An advanced laboratory course designed to train students in laboratory technique.

PREREQUISITE: For students in fourth year honours Physics.

Day Division: Annually (laboratory six hours a week).

PHYSICS 350. [16]. *Mathematics of Physics*

A course in the mathematical tools of Physics.

TEXT: Margenau and Murphy, *The Mathematics of Physics and Chemistry*.

PREREQUISITE: Open only to honours Physics students, except by special permission of the Department.

PHYSICS 360. [13]. *Laboratory Technique*

An advanced laboratory course designed to train students in experimental technique.

PREREQUISITE: For students in fifth-year honours Physics.

Day Division: Annually (laboratory nine hours a week).

Not offered 1952-53.

Discontinued Courses

	<i>Last offered</i>
PHYSICS 14b. <i>Mechanics</i>	1950-51
PHYSICS 15. <i>Mathematics of Physics I</i>	1950-51

POLITICAL SCIENCE AND PUBLIC ADMINISTRATION

Assistant Professor and

Chairman of the Department P. W. Fox, M.A.

Assistant Professor D. C. Rowat, A.M., Ph.D.

Sessional Lecturers R. A. MacKay, B.A., Ph.D., F.R.S.C.

E. A. Forsey, M.A., Ph.D.

R. A. J. Phillips, B.A.

Students intending to enter honours in Political Science in the third year are advised to take Political Science 210 in the second year. In the following years their courses will be selected as follows: In the third year, Political Science 310 and 360 and three additional subjects approved by the Department; in the fourth year, Political Science 340 and 370, Political Science 320 *or* 350 *or* 355, and two additional subjects; in the fifth year, Political Science 380, Political Science 320 *or* 350 *or* 355, and one other in Political Science (which normally would be Political Science 390 if the candidate is preparing a thesis), plus two additional subjects.

Students are encouraged and assisted to make use of the unique advantages Ottawa offers in personnel and material in the fields of politics, government and public administration. Essays and papers on special topics will be required regularly and candidates may be asked to present a dissertation on some topic involving independent investigation, the subject to be chosen in consultation with a full-time member of the Department.

An honours student in Political Science will be expected to take a minor in some other subject, preferably Economics, Public Law, History, Sociology, or Philosophy. He will also be required to show, by his final year, a reading knowledge of a modern language other than English.

POLITICAL SCIENCE 210. [2]. *Introduction to Political Science*

A study of modern political ideas and institutions with particular reference to the structure of the government of Canada.

TEXTS: Corry, *Democratic Government and Politics*.

Dawson, *The Government of Canada*.

Day Division: Annually (lectures two hours a week, group discussion one hour a week).

Evening Division: Annually (lectures two hours a week, group discussion half an hour a week).

POLITICAL SCIENCE 310. [3]. *Comparative Government*

A comparative study of the governments of the United Kingdom, the United States of America, and Australia.

TEXTS: Jennings, *The British Constitution*

Ogg and Ray, *Essentials of American Government*

Brady, *Democracy in the Dominions*

PREREQUISITE: Political Science 210.

Day Division: Annually (lectures two hours a week, group discussion one hour a week).

Evening Division: Annually (lectures two hours a week).

POLITICAL SCIENCE 320. [11]. *Seminar in Canadian Government*

An advanced course in Canadian political institutions and problems.

PREREQUISITE: Permission of the Department.

Evening Division: 1952-53 and alternate years (seminar 2½ hours a week).

POLITICAL SCIENCE 330. [13]. *Seminar in Foreign Government (Russia)*

An examination of the theory and practice of the Soviet State.

PREREQUISITES: Political Science 210 or permission of the Department.

Evening Division: 1952-53 and alternate years (seminar 2½ hours a week).
(Alternates with Political Science 335.)

POLITICAL SCIENCE 335. [16]. *Seminar in Foreign Government (Far East)*

A study of public affairs in the Far East with particular reference to the structures and philosophies of government in this region.

PREREQUISITE: Political Science or permission of the Department.

Evening Division: 1953-54 and alternate years (seminar 2½ hours a week).

POLITICAL SCIENCE 340. [6]. *Introduction to Public Administration*

A general study of problems in Canadian public administration, including an examination of: structure and organization in government; administrative practices and leadership; the relationship between administration and politics, the law, and the interests of the state and its citizens; and related topics.

TEXTS: White, *Introduction to the Study of Public Administration*.

Simon et al., *Public Administration*.

Cole, *The Canadian Bureaucracy*.

Buck, *Financing Canadian Government*.

Institute of Public Administration of Canada, *Proceedings*.

PREREQUISITE: Political Science 210; preferably Political Science 310 also.

Day Division: Annually (lectures and seminars two hours a week, group discussion one hour a week).

Evening Division: Annually (lectures and seminars two hours a week).

POLITICAL SCIENCE 350. [17]. *Seminar in Public Administration (Provincial and Municipal)*

An advanced course dealing with problems of federal-provincial relations and provincial and municipal administration.

PREREQUISITE: Permission of the Department.

Day and Evening Divisions: 1953-54 and alternate years (seminar 2½ hours a week).

POLITICAL SCIENCE 355. [18]. *Seminar in Public Administration*

An advanced course, the first part of which deals with the literature on administration, including writings on administrative organization and administrative discretion and recent contributions in socio-psychological thought. The second part examines theories of the democratic state and of the place of individuals in it, including such concepts as "liberty", "equality", "rights and duties".

PREREQUISITE: Permission of the Department.

Day and Evening Divisions: 1952-53 and alternate years (seminar 2½ hours a week).

See also Psychology 380, *The Psychology of Political Groups*.

POLITICAL SCIENCE 360.[4]. *History of Political Thought*

A general survey of the history of thought, with special reference to political theory, from ancient times to the present. A course in ideas, their sources, their validity, and their significance.

TEXTS: To be announced.

PREREQUISITE: Political Science 210 or permission of the Department.

Day and Evening Divisions: Annually (lectures and discussions, hours arranged).

POLITICAL SCIENCE 370.[9]. *Seminar in Modern English Political Thought*

A specialized study of the development of English political theory and of the significant English political philosophers from the seventeenth century to the present. Hobbes, Milton, Sidney, Harrington, Filmer, Halifax, Locke, Hume, Burke, Bentham, Mill, Maine, Austin, Spencer, Green, Bosanquet, the Fabians, Hobhouse, Wallas, Laski, Cole, etc.

TEXTS: The works of the relevant political philosophers.

PREREQUISITE: Political Science 360.

Day Division: 1952-53 and alternate years (tutorials three hours a week).
(Alternates with Political Science 375.)

POLITICAL SCIENCE 375.[12]. *Seminar in European Political Thought*

A study of the history, development and doctrines of French political theory from the sixteenth century to the present, and of German and Russian political theory in the last century.

PREREQUISITES: Political Science 360 and at least a reading knowledge of French.

Day Division: 1953-54 and alternate years (tutorials three hours a week).
(Alternates with Political Science 370.)

POLITICAL SCIENCE 380.[10]. *Seminar in Political Philosophy (The State and the Individual)*

An examination of theories of the state and of the place of individuals in it, with particular attention paid to the modern democratic state and to the study of such concepts as "liberty", "equality", "rights and duties".
This is a highly theoretic course which requires extensive reading and participation in seminar discussion.

PREREQUISITES: Political Science 210 or 310, and Political Science 360 or 370, or permission of the Department.

Not offered 1952-53. (See Political Science 355.)

POLITICAL SCIENCE 390.[14]. *Seminar in Political Research*

This course, for honour students only, is designed for training in research techniques and for the discussion and criticism of honour dissertations, and other special research projects pursued under the auspices of the Department in connection with the facilities available in the Archives of Canada, the Library of Parliament, and the government departments.

Day Division: Annually, for honours students only (hours arranged).

Discontinued Courses

Last offered

POLITICAL SCIENCE 1. *The Government of Canada* 1947-48

POLITICAL SCIENCE 7.[Personnel Management 102]. *Civil Service Principles and Legislation* 1949-50

PSYCHOLOGY

Assistant Professor and

Chairman of the Department . . . F. R. Wake, B.A., Ph.D.

Sessional Lecturers Florence S. Dunlop, A.M., Ph.D.

F. E. Whitworth, A.M., Ph.D.

J. F. Dawe, B.Sc., B.Ed., A.M.

T. W. Cook, M.A., Ph.D.

R. A. Wendt, M.A.

Ruth Hoyt, B.S., M.A., Ph.D., R.N.

C. M. Mooney, M.A.

PSYCHOLOGY 210. [2]. *General Psychology*

A survey of general psychology. A systematic study of sensation, perception, motivation, learning, emotion, and thought. The psychology of individual differences in intelligence, aptitude, and personality. Psychology applied to study habits, careers, and personal adjustment. Contemporary psychological theories.

TEXT: To be announced.

Day Division: Annually (lectures three hours a week).

Evening Division: Annually (lectures two hours a week). Also Summer 1952 (lectures five hours a week).

PSYCHOLOGY 310. [6]. *Social Psychology*

An examination of the psychological conditions of social life. Review of theories of motivation, and their usefulness in social theory. Psychological analyses of religion and morals, war and group conflict, political power and authority, public opinion and propaganda, crime, fashion, national and racial characteristics. (This course is also listed as Sociology 310.)

TEXT: To be announced.

PREREQUISITE: Psychology 210.

Day Division: 1952-53 (lectures three hours a week).

Evening Division: 1953-54 (lectures two hours a week).

PSYCHOLOGY 320. [5]. *Child Psychology*

This course traces the growth and development of the child from birth to adolescence. Prevention, diagnosis and correction of various types of problems will be stressed. Considerable use will be made of case histories and suitable films. Several texts and a variety of reference materials will be used.

PREREQUISITE: Psychology 210.

Day Division: Not offered 1952-53.

Evening Division: 1952-53 (lectures two hours a week).

PSYCHOLOGY 340. [4, Personnel Management 100]. *Personnel Psychology*

This course considers the needs of personnel administrators, supervisors and executives. It deals with current problems and procedures in personnel management, including the following: employee selection, induction, training, placement; transferring, up-grading and employee relations. Uses of tests and rating scales in the administration of personnel. Uses of job analysis, time and motion study. Maintaining morale and job satisfaction, enquiry techniques. How to conduct a conference. How to interview. Problems of communication at employee, supervisor and management levels.

TEXTS: To be announced.

PREREQUISITE: Psychology 210, or permission of the instructor. Recommended: Mathematics 230.

Evening Division: 1952-53 (lectures two hours a week). Also Summer 1952 (lectures five hours a week).

PSYCHOLOGY 370.[7]. *Theory of Personality and Adjustment*

This course deals with theories of personality and considerations of processes of normal adjustive behaviour from the mental health viewpoint. The course introduces techniques of personality evaluation which serve as indicators of normal and abnormal adjustments. Students are encouraged to investigate the adequacy of their own adjustments to life.

TEXTS: To be announced.

PREREQUISITES Psychology 210.

Day Division: 1952-53 (lectures three hours a week)

Evening Division: Not offered 1952-53.

PSYCHOLOGY 380.[8]. *The Psychology of Political Groups*

Analysis of psychological factors affecting the formation and functioning of groups. Development of political groups in family, clan, nation and empire. Psychological factors in the Nazi and Communist parties, and in international relations.

PREREQUISITE: Any two courses in Psychology, Sociology, Political Science, Economics, or History.

Evening Division: 1952-53 (lectures two hours a week).

PUBLIC LAW

Sessional Lecturer . . . G. F. Henderson, B.A.

PUBLIC LAW 310.[1, 100]. *The Elements of Public Law*

An introduction to the study of law, designed to acquaint the non-lawyer with the principal institutions, concepts, and classifications of the law, with special reference to Canada. (Except for students with previous legal training, this course is prerequisite for other courses in Public Law.)

Evening Division: 1953-54 and alternate years (lectures 2½ hours a week).
(Alternates with Public Law 320.)

PUBLIC LAW 320.[3, 103]. *Administrative Law*

This course is designed as a study of the field of administrative law in the light of current social and economic problems and relationships and in the light of the trends of modern legislation, with particular reference to Canada. Theories influencing development in the field; delegated legislation and delegated adjudicative power, their nature and extent, reasons for delegation, dangers; judicial and extra-judicial review and control; administrative procedure; suggested reforms.

PREREQUISITE: Public Law 310.

Evening Division: 1954-55 and alternate years (lectures 2½ hours a week, seminars arranged).

See also History 330, *Canada from 1791*.

Political Science 320, *Seminar in Canadian Government*

Discontinued Course

Last offered

PUBLIC LAW 2.[102]. *The Constitutional Law of Canada* 1950-51

RELIGIOUS KNOWLEDGE

Sessional Lecturer S. MacLean Gilmour, Ph.D.

RELIGIOUS KNOWLEDGE 210.[1]. *New Testament Literature*

An introduction to the history and literature of the New Testament. Religious and social background of the writings of the New Testament. The Four Gospels, their origins and the problems of their authorship and composition, including the Synoptic and Johannine problems. The life and letters of Paul and the beginnings of the Christian Church. The non-Pauline epistles and the Christian Apocalypse.

Not offered 1952-53.

RELIGIOUS KNOWLEDGE 320. *The Great Non-Christian Religions*

Distinguishing characteristics of religion. Primitive religion. The religion of ancient Egypt. The history, principles, practices, and literature of Hinduism, Buddhism, Confucianism, Taoism, Shinto, Zoroastrianism, Judaism, and Islam. The strength and weakness of the various faiths, and their present vitality. Areas of possible or actual conflict and co-operation.

TEXTS: Noss, *Man's Religions* (Macmillan); Ballou, *World Bible* (Viking Press)

Evening Division: 1952-53 (lectures two hours a week).

RUSSIAN

Sessional Lecturers . . . D. I. Lalkow, M.D.

F. P. Bohatirchuk, M.D.

Note: Students in all classes are advised to procure Müller's Russian-English and English-Russian dictionaries.

RUSSIAN 51. [A]. *Beginners' Russian*

The work comprises the elements of grammar; orthography, writing, pronunciation, accentuation and reading of easy texts. The course in grammar, though elementary in form, is practical for reading, writing and speaking Russian. Translation of exercises from Russian into English and from English into Russian. Elementary conversational practice. (Credit is given for this course only upon the subsequent completion of Russian 110.)

TEXTS: Bondar, *Simplified Russian Method*, 7th Edition

Patrick, *Elementary Russian Reader*

Kany and Kaun, *Elementary Russian Conversation*

Evening Division: 1952-53 (lectures three hours a week).

RUSSIAN 110. [1]. *Russian Language*

Review and completion of twenty-four lessons in Bondar's *Simplified Russian Method*. By then the student will have a vocabulary sufficient for simple conversation and for easy translations. Simple narratives of Russian life, customs and history, with short stories from Chekhov, Turgenyev and Tolstoy, and poetic works by Pushkin, Lermontov and others. Optional course in commercial correspondence: business letters, terms and phrases.

TEXTS: Bondar, *Simplified Russian Method*, 7th Edition

Patrick, *Intermediate Russian Reader*

Kany and Kaun, *Elementary Russian Conversation*

PREREQUISITE: Russian 51.

Evening Division: 1952-53 (lectures three hours a week).

RUSSIAN 210. [2]. *Russian Language and Readings*

Completion of Bondar's text and advanced course in grammar and syntax as exemplified in Russian classics, prose and poetry. The main object of this course is the acquisition of the 'feel' of the language. Composition of short and simple essays. Conversation. Translation. Further readings from Russian literature as indicated in Russian 110. Continuation of commercial Russian begun in Russian 110; readings dealing with various branches of commercial activity (optional).

TEXTS: As for Russian 110.

REFERENCE TEXTS: Anna Semeonoff, *New Russian Grammar*

Patrick, *Intermediate Russian Reader*

Kany and Kaun, *Intermediate Russian Conversation*

PREREQUISITE: Russian 110.

Evening Division: 1952-53 and alternate years (lectures three hours a week).

RUSSIAN 310. [3]. *Russian Language and Literature*

Advanced course in Russian syntax, writing of essays, translation from English to Russian, conversation, Russian literature, and reading from the Russian press.

TEXTS: I. A. Sikorsky, *Kniga Zhizni*
 Turgenev, *Fathers and Sons*
Novoye Russkoye Slovo (Sunday edition)
 Kany and Kaun, *Advanced Russian Conversation*

PREREQUISITE: Russian 210.

Evening Division: 1953-54 and alternate years (lectures three hours a week).

SOCIAL POLICY

(This listing discontinued after 1949-50)

<i>Discontinued Courses</i>	<i>Last offered</i>
SOCIAL POLICY 1.[101]. <i>Social Legislation</i>	1949-50
SOCIAL POLICY 2.[102]. <i>Labour Policy</i>	1948-49

SOCIOLOGY

(including Anthropology)

Lecturer and

Chairman of the Department . . . J. A. Porter, B.Sc.(Econ.)

Sessional Lecturer June H. MacNeish, Ph.B., A.M.

Note: Students interested primarily in Anthropology are advised to take Sociology 320, 330 and 340 following Sociology 210.

SOCIOLOGY 210.[1]. *Introduction to Sociology and Anthropology*

A comparative study of social institutions and social structure, aimed at analyzing basic forms of social relations, social groups, social control, and the conditions of social change. Attention is paid to both the simpler peoples and complex societies.

Day Division: Annually (lectures two hours a week, group discussion one hour a week).

Evening Division : 1952-53 (lectures two hours a week).

SOCIOLOGY 310.[6]. *Social Psychology*

(Offered in the Department of Psychology as Psychology 310)

SOCIOLOGY 320.[3a]. *Race and Culture Contacts*

A survey of the problems arising from the contacts of peoples of different races and cultures. Particular attention will be paid to Canadian problems. (Half course.)

PREREQUISITE: Sociology 210.

Day Division: 1952-53 (lectures three hours a week, *second* term).

SOCIOLOGY 330.[4b]. *Archaeology and Ethnology*

A consideration of the aims and methods of archaeology and ethnology presented in terms of Canadian pre-history. A brief archeological excavation in the field will be arranged. (Half course.)

PREREQUISITE: Sociology 210 or permission of the instructor.

Day Division: 1952-53 (lectures three hours a week, *first* term).

SOCIOLOGY 340.[7]. *Human Origins*

A survey of the physical and cultural development of man from his earliest known beginnings to the early food-producing horizons. The course comprehends the physical evolution of man and his concomitant cultural growth.

Evening Division: 1952-53 (lectures two hours a week).

SOCIOLOGY 350. *Tutorial in Sociology*

A course to permit a student to pursue his interests in a particular area of Sociology or Anthropology. During the course the student will prepare papers as the basis of discussion between him and his tutor.

PREREQUISITES: Sociology 210, one other Sociology course (other than Sociology 310) and the permission of the Department.

Day Division: Annually (tutorial hours arranged).

SOCIOLOGY 360. [2]. *Theories and Methods of Sociology*

Scope of sociology. Relationship of sociology to the other social sciences. Main contributions to sociological thought: Comte, Spencer, Marx, Pareto, Hobhouse, Durkheim, Veblen. Development of sociology in the U.S.A. Critical examination of the techniques employed in contemporary sociological investigation.

PREREQUISITE: Sociology 210.

Day Division: 1952-53 and alternate years (lectures two hours a week, group discussion one hour a week).

SOCIOLOGY 370. [5]. *Sociology of the Primary Group*

An examination of small face-to-face groups and their relationship to the social structure of the larger society. Particular attention will be paid to the family, children's play groups, juvenile gangs, and the industrial working group.

PREREQUISITE: Sociology 210.

Not offered 1952-53.

SPANISH

Sessional Lecturer . . . Bohdan Plaskacz, Lic. phil. litt.

SPANISH 110. [1].

Grammar, reading, translation and oral exercises.

TEXTS: House and Mapes, *Shorter Spanish Grammar*.

Cano and Saenz, *Easy Spanish Plays*.

Espinosa, *Cuentitos faciles*.

Keniston, *Reading Spanish*.

PREREQUISITE: Junior Matriculation Spanish.

Day Division: Not offered 1952-53.

Evening Division: 1952-53 (lectures three hours a week).

SPANISH 210. [2].

Lectures on the history of Spanish literature and civilization; reading, translation, oral exercises and grammar review.

TEXTS: Walsh, *Repaso*.

Alarcon, *El sombrero de tres picos*.

Martinez Sierra, *Sueno de una noche de agosto*.

Bosworth and James, *Cuentos Modernos*.

PREREQUISITE: Spanish 110.

Day Division: Not offered 1952-53.

Evening Division: 1952-53 (lectures three hours a week).

Discontinued Courses

Last offered

SPANISH A. *Beginners' Spanish* 1951-52

SPANISH 3. *Commercial Spanish* 1950-51

SPANISH 4.	<i>Third-year College Spanish</i>	1951-52
SPANISH 5.	<i>Fourth-year College Spanish</i>	1951-52
SPANISH 11.	<i>Beginners' and First-year College Spanish</i>	1951-52

STATISTICS

(This listing discontinued after 1946-47)

Renumbered Courses

New number

STATISTICS 1. [100]. *Introduction to Statistical Methods* . . MATHEMATICS 230, 235

STATISTICS 2. [101]. *Statistical Services* MATHEMATICS 14

For current courses in statistics, see the Departments of Mathematics and Economics.

ZOOLOGY

(See Biology)

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